IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

SMART PATH CONNECTIONS, LLC.,	(	CAUSE NO. 2:22-CV-296-JRG
Plaintiff,	)	
vs.	(	
NOKIA CORPORATION, et al.,	)	MARSHALL, TEXAS
Defendants.	(	APRIL 2, 2024
	)	8:30 A.M.

VOLUME 2

TRIAL ON THE MERITS

BEFORE THE HONORABLE RODNEY GILSTRAP
UNITED STATES CHIEF DISTRICT JUDGE
and a jury

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EXAMINATION

THE COURT: Be seated, please.

Are the parties prepared to read into the record those items from the list of pre-admitted exhibits used during yesterday's portion of the trial?

MR. BENNETT: Yes, Your Honor, we are.

THE COURT: All right. Let me ask you to go to the podium and offer that rendition into the record, please.

MR. BENNETT: For Plaintiffs, PX 8, JX 1, JX 2, JX 3, PX 25-1, PX 25-2, PX 25-3, PX 25-4, PX 25-5.

THE COURT: All right. Any objection to that rendition from the Defendants?

MS. BEATON: No, Your Honor.

THE COURT: Does Defendant have a similar rendition to offer?

MS. BEATON: Yes, Your Honor.

THE COURT: Please proceed to do so.

MS. BEATON: Good morning. Erin Beaton on behalf of Defendant Nokia.

THE COURT: Good morning.

MS. BEATON: Good morning. Yesterday, April 1st, 2024, Defendant used DX 7c as in Charlie, DX 23, DX 36, and DX 37a as in alpha.

THE COURT: All right. Does Plaintiff have any objection to that rendition from defendant?

MR. BENNETT: No, Your Honor.

THE COURT: Thank you, counsel.

Is there anything else we need to cover, counsel, before I bring in the jury and we proceed with the next Plaintiff's witness?

MR. BENNETT: Not for Plaintiff.

MR. DACUS: No, Your Honor.

THE COURT: All right. Let's bring in the jury, please.

(Whereupon, the jury entered the courtroom.)

THE COURT: Welcome back, ladies and gentlemen. Please have a seat.

All right. We'll continue with the Plaintiff's case in chief.

Plaintiff, call your next witness.

MR. BENNETT: Your Honor, Smart Path calls Jeremy Pitcock. Mr. Liddle will be handling the examination.

THE COURT: All right. Mr. Pitcock, if you'll come forward and be sworn, please.

(Whereupon, the oath was administered by the Clerk.)

THE COURT: Please have a seat on the witness stand.

Mr. Liddle, you may proceed with direct examination when you're ready.

MR. LIDDLE: Thank you, Your Honor.

JEREMY PITCOCK,

having been first duly sworn, testified under oath as follows:

DIRECT EXAMINATION

BY MR. LIDDLE:

Q. Good morning, Mr. Pitcock.

A. Good morning.

Q. Please introduce yourself to the jury.

A. My name is Jeremy Pitcock. I'm the manager of Smart Path Communications -- Connections, sorry. And I serve as the manager in that company.

Q. Okay. And can you please describe your educational background?

A. So I have a Bachelor's in science in physics from the Massachusetts Institute of Technology, or MIT. I also have a law degree from the University of Pennsylvania.

Q. And what did you do after law school?

A. So after law school, I became an attorney in 1999. I also became registered as a patent agent in the United States Patent and Trademark Office in 2001, which means I can help inventors get patents in the Patent and Trademark Office.

Q. Okay. Let's talk a little bit about Smart Path. When was this company formed?

A. Smart Path was formed in 2020, July 15th, 2020.

Q. Okay. And what was the purpose of forming Smart Path?

A. So Smart Path was formed because Orckit IP had been

unsuccessful in trying to license its patents, and so Smart Path was formed in order to license and enforce those patents.

Q. And how did you come to meet the Orckit group?

A. So a networking executive that I had worked with before in the past from a company called 3Com introduced me to Mr. Tamir and others at Orckit.

Q. Okay. So you acquired these patents from Orckit.

A. Yes.

Q. And what are the details of that acquisition of the Smart Path patents?

A. So Orckit IP transferred the patents to my company, and in return they get 42 percent of all the revenues that are generated.

Q. Okay. So they get 42 percent. Is that your testimony?

A. Yes.

Q. Okay. But did you pay any money up front to Orckit to obtain the patents?

A. No, I did not.

Q. Okay. Does this provide Orckit any other benefits?

A. Yes. So my company is responsible for paying the cost of the licensing campaign.

Q. Okay. And why is this so beneficial to Orckit?

A. It takes substantial revenue to license and enforce patents against a company like Nokia.

Q. And, Mr. Pitcock, what was your preparation and

decision-making process on whether to acquire these patents from Orckit?

A. So in speaking to Mr. Tamir, I found out about the background and history of Orckit, how they were in the telecommunications space and publicly-traded company, so their story of invention basically made sense to me.

I looked at their history of research and development, I looked another the patents and the prosecution histories, which is the back and forth between the inventor and the Patent and Trademark Office when you're acquiring a patent, and then I looked at basic financial information in the router and switch market.

Q. Okay. And just to kind of reset, what are the patents asserted in this case?

A. So there are three patents asserted in this case. They all relate to networking technology.

Q. Okay. And do you have any understanding of previous attempts to license Nokia to the Smart Path patents?

A. I do.

Q. And what were those?

A. So in 2017, Orckit IP sent a letter to Nokia offering to license the entire portfolio.

MR. DACUS: Your Honor, I apologize for interrupting, but I need to object. There's a lack of personal knowledge, foundation -- there's a lack of

foundation, lack of personal knowledge, talking about letter in 2017 that he did not author and he was not a recipient on.

THE COURT: All right. I'll sustain the objection. But, counsel, if you can lay a foundation, you can revisit the topic.

MR. LIDDLE: Absolutely.

Q. (BY MR. LIDDLE) Mr. Pitcock, when you acquired the patents from Orckit, did you review any materials?

A. I did.

Q. And what did those materials consist of?

A. So, as I mentioned before, I looked at the patents and prosecution history. I also looked at background materials involving the patents, including the letter that was sent to Nokia.

Q. Okay. So you reviewed a notice letter from Orckit IP to Nokia in 2017.

A. I did.

Q. Okay.

MR. LIDDLE: Your Honor, I'd like to move forward with examination.

THE COURT: Ask your question. We'll see if we get another objection.

MR. LIDDLE: Okay.

Q. (BY MR. LIDDLE) All right. Let me re-ask my question. What is your understanding of previous attempts to license

Nokia to the Smart Path patents?

A. So my understanding is Orckit IP sent a letter to Nokia.

THE COURT: Just a minute, Mr. Pitcock.

MR. DACUS: Your Honor, we have the same objection. There's no foundation. He has no personal knowledge. This is a letter on which he was not an author nor a recipient.

THE COURT: I understand, but I'm going to overrule the objection. I think there's an adequate foundation that's been laid. I'll permit the witness to answer the question.

Go ahead and finish the answer, Mr. Pitcock.

THE WITNESS: Yes, Your Honor.

So I saw a letter which specifically identified the three patents-in-suit to Nokia offering to license them to those patents, along with the others in their portfolio.

Q. (BY MR. LIDDLE) Okay. And what we have up here on the screen, does this look like the letter that you reviewed when you acquired the patents?

A. Yes, it is.

Q. Okay. And can you remind me what the date of this letter is?

A. It's dated November [sic] 27th, 2017.

Q. Now, to your knowledge, did Nokia ever respond to Orckit when they sent this letter?

A. To my knowledge, they never responded.

Q. Okay. So Orckit sent the letter in 2017, but to your

knowledge there was no response.

A. That's correct.

Q. Okay. So since 2017 when Nokia received the letter, they never wrote back and said, we don't infringe?

A. That's right.

Q. And since then, they never wrote back and said, these patents are invalid?

A. That's correct.

Q. So did Smart Path ever attempt to contact Nokia prior to filing this lawsuit?

A. We did not.

Q. Okay. And why not?

A. In my experience in licensing, which has spanned many years, when a company like Nokia doesn't respond to a licensing letter, the only way they will take you seriously is if you file a lawsuit.

Q. Okay. And tell me again, what is your understanding of what the patents cover?

A. So the patents cover improvements to --

MR. DACUS: Your Honor, I object. This is a violation of Defendant's MIL No. 5. Happy to approach.

THE COURT: Approach the bench, counsel.

(The following was had outside the hearing of the jury.)

THE COURT: Defendant's MIL No. 5?

MR. DACUS: Yes, Your Honor. I'm happy to explain my objection.

THE COURT: I understand your objection.

What's your response, Mr. Liddle?

MR. LIDDLE: I'm asking for a high-level explanation of what the asserted patents cover, and that's what the MIL specifically says. It says it will not prohibit --

THE COURT: I see the MIL order.

Well, the problem is you may be asking a high-level question. I'm concerned you're going to get a low-level answer. The only thing I know to do is let you proceed with your question.

And if this gets too granular and gets below a high level, Mr. Dacus, raise your objection again and I'll rule on it.

MR. DACUS: Thank you, Your Honor.

MR. LIDDLE: Thank you, Your Honor.

THE COURT: Okay.

(The following was had in the presence and hearing of the jury.)

THE COURT: Let's proceed, please. Restate your question, counsel.

MR. LIDDLE: Yes, Your Honor.

Q. (BY MR. LIDDLE) So, Mr. Pitcock, what is your high-level understanding of what the patents cover?

A. So the patents cover at a high level networking technology, which is essentially the backbone for digital communications here in the United States.

Q. Okay. And are you familiar with networking technology?

A. I am.

Q. And how are you familiar with networking technology?

A. So I have worked with networking companies for over two decades as an attorney. I've worked with 3Com JDS Uniphase, Intel, a small company called Bay Networks which was later acquired by JDS Uniphase, in networking technology.

Q. And why is networking technology important and something that Smart Path wants to help license?

A. So networking technology is used for almost all the digital communications between people in the United States and companies in the United States. These patents generally are optimizations of that network, and there's an incredible amount of data.

As you can see in this exhibit, you know, we are currently at 120 zettabytes a year, and I know that is sort of like saying a bajillion. So a zettabyte is a trillion gigabytes. You know, your average computer has, you know, a hundred to a thousand gigabytes of storage. This is a trillion.

If you think of a song on the internet, it's about 4 gigabytes in length for a four-minute song. This would be 250

billion songs, and it would take 2 million years to play them.

Q. And, Mr. Pitcock, before acquiring the Smart Path patents from Orckit, did you review Orckit's record of innovation?

A. I did.

Q. And are you familiar with Orckit's research and development efforts?

A. I am.

Q. Okay. And can you give us a little summary of their research and development efforts?

A. So Orckit was involved in various standard-setting organizations, in particular IEEE, which is the Institute for Electronics and Electrical Engineering. They described it earlier as basically trying to make sure that everything works together in the network. That's why you create these standards. They were contributors to that particular organization.

They were called out as a particular innovator in one of the articles in 2005, and they spent over $200 million in research and development in the relevant time frame on networking technology.

Q. Now, is it common in network technology industry for companies to use specialists like you to help license their IP?

A. Yes, it's extremely common.

Q. In fact, does Nokia do this?

A. Yes, they do. They have -- there are several companies with Nokia intellectual property that are set up to license and enforce patents.

Q. Okay. And how is it that Smart Path is able to protect the patents created by another company?

A. So patents are property rights. You've seen this graphic before, but it's basically like a piece of land or a house. They can be transferred from one company to another, and now we own the title to the patents from Orckit IP.

Q. So why do you think it's important to protect the innovations of companies like Orckit?

A. So the U.S. patent system is critical to companies here remaining competitive. So many of the incredible inventions like the telephone that are made here are used all around the world. We have to be able to use inventions made abroad here to remain competitive. The U.S. Patent Office facilitates this.

When a company like Orckit creates a patent that everybody needs to use, they file it in the USPTO and then all the companies here have the ability to use the knowledge from that patent. But the law requires that when companies use these patents, that they pay a reasonable royalty.

THE COURT: Let me interrupt the witness.

The Court will instruct the jury on what the law requires. The witnesses and counsel are not going to offer

instructions to the jury on what the law requires in this context.

The question I think has been fully answered. I'm going to instruct the witness to keep his answers within the scope of the questions asked, and let's move on to the next question.

MR. LIDDLE: Yes, Your Honor.

Q. (BY MR. LIDDLE) And so why is Smart Path maintaining this lawsuit?

A. We're maintaining this lawsuit because we think Nokia should follow the law of the United States.

Q. And what do the patent laws say about using an invention without authorization?

MR. DACUS: Your Honor, I'll object as asking for a legal conclusion.

THE COURT: Well, with that premise, I will sustain the objection.

MR. LIDDLE: Okay.

Q. (BY MR. LIDDLE) In the United States, is there any --is there anything that compensates companies when someone else is using their technology?

A. Yes, a reasonable royalty.

Q. Okay.

MR. LIDDLE: No further questions. Pass the witness.

THE COURT: All right. Cross examination by the Defendant?

MR. DACUS: Yes, Your Honor. Thank you.

If we may have a moment to pass out binders.

THE COURT: You may distribute witness binders.

(Pause in proceedings.)

THE COURT: All right, counsel. Proceed with cross examination.

MR. DACUS: Thank you, Your Honor.

CROSS EXAMINATION

BY MR. DACUS:

Q. Good morning, Mr. Pitcock.

A. Good morning, Mr. Dacus.

Q. I think you put up a slide there that said you live in New Jersey right outside of New York City. Correct?

A. That's correct.

Q. So welcome to Marshall.

A. Thank you. It's good to be back.

Q. I'd like to ask you a few questions about your testimony if that's okay.

A. Of course.

Q. I think you said you've been a lawyer there in New York for going on 25 years now. Correct?

A. It's over 20 years, yes.

Q. And you're here as the representative for Smart Path.

Correct?
A. That's correct.
Q. You own 100 percent of Smart Path. Correct?
A. I do.
Q. And there are no employees of Smart Path. Correct?
A. That's right.
Q. So although you said you're the manager, there's really no one to manage. Smart Path is 100 percent owned by you. Correct?
A. Well, I disagree there's no one to manage, but I agree it's a hundred percent owned by me.
Q. Well, you manage lawsuits. Correct?
A. I manage licensing, yes.
Q. Okay. Including lawsuits. Correct?
A. That's right.
Q. Now, in fact, I think you told us previously in your deposition that your law firm really doesn't do any legal work anymore. Correct?
A. It does --
MR. LIDDLE: Objection, Your Honor. It mischaracterizes the testimony. It's not a law firm. I'm not sure why it's relevant.
THE COURT: I'll permit the question.
THE WITNESS: I'm sorry. Would you --
THE COURT: Go ahead.

THE WITNESS: I'm sorry, Your Honor.

THE COURT: That's all right. Go ahead.

THE WITNESS: Would you mind repeating the question?

Q. (BY MR. DACUS) Not at all. You have a law firm called Pitcock Law Group. Correct?

A. I do.

Q. That law firm doesn't do any legal work is what you told us previously. Is that correct?

A. It does little legal work, and most of it is done by my wife.

Q. You spend your time managing limited liability companies like Smart Path. Correct?

A. I do.

Q. And the business model of Smart Path, LLC, is to acquire patents that you didn't invent and then attempt to make money on those, including through lawsuits. Correct?

A. Yes.

Q. That's what you do for a living. Fair?

A. Yes.

Q. And what you get in return, the reason you do it, is you want a percentage of what a jury might award in a lawsuit. Correct?

A. That's correct.

Q. And you're here to try to collect 10 to 15 percent of anything that this jury might award. True?

A. That's correct.
Q. Now, I'd like to ask a few questions about the history of these patents. Is that okay?
A. Of course.
Q. All right. First thing I want to do is I want to make sure that we understand the difference between Orckit-Corrigent and Orckit IP. Okay?
A. All right.
MR. DACUS: Ms. Brunson, may I have the document camera, please?
Q. (BY MR. DACUS) This is one of your slides that you just showed the jury. And do you see there where you said to the jury Orckit receives 42 percent of revenues? Do you see that?
A. I do.
Q. And that -- I wrote in the word IP. Do you see that?
A. I assume that's your writing, yes.
Q. Okay. So let's be clear here. Orckit-Corrigent was the operating company that was in the modem business in the '90s. Correct?
A. Yes.
Q. And then it's the business that Mr. Tamir said attempted to reinvent itself from scratch in 2000. Correct?
A. Yes.
Q. And then ultimately was unsuccessful and went bankrupt. Fair?

A. Ultimately it did, yes.
Q. Okay. Now, that's -- that's different from Orckit IP. Correct?
A. Yes.
Q. Orckit IP is the company that Mr. Tamir formed in order to buy the patents out of bankruptcy. Correct?
A. I don't know that he formed it, but it was formed for that purpose.
Q. Okay. You heard him say yesterday that he formed Orckit IP, he attempted to get the patents out of the bankruptcy, but then the bankruptcy trustee said, no, you can't do that; that's self-dealing because you were an officer, and you need someone else to run Orckit IP.

You remember that testimony yesterday?

MR. LIDDLE: Objection, Your Honor; misstates the testimony.

THE COURT: He's entitled to offer the question as he thinks is accurate, counsel. I'm going to overrule the objection that it's mischaracterizing. If the witness disagrees with the question, he's free to disagree with it in his answer.

MR. LIDDLE: Thank you, Your Honor.

THE COURT: So overruled.

THE WITNESS: I'm sorry --

THE COURT: Restate the question.

MR. DACUS: I'd be happy to, Your Honor. Thank you.

Q. (BY MR. DACUS) Orckit IP is the company that Mr. Tamir originally formed for the purpose of trying to get these patents out of the bankruptcy, and then the bankruptcy liquidator said, no, you can't do that because that's self-dealing because you were an officer of the company. Correct?

A. I don't remember that as being his testimony.

Q. Okay. And you remember that Mr. Tamir said that he got someone else to take over Orckit IP while Mr. Tamir was still funding the purchase of those patents. You remember that. Correct?

A. Generally speaking, yes.

Q. Okay. You and I can agree that Orckit IP and Orckit-Corrigent are two different entities. Correct?

A. Absolutely.

Q. And Orckit IP is owned solely by a gentleman by the name of Yehuda Binder. Correct?

A. I don't know.

Q. You know who Mr. Binder is. Correct?

A. I do.

Q. With respect to this Orckit receives 42 percent of revenues, it's actually Orckit IP that receives those revenues. Correct?

A. Yes.

MR. LIDDLE: Objection; asked and answered.

THE COURT: Sustained.

Q. (BY MR. DACUS) So be the clear, Orckit-Corrigent the company, the investors of Orckit-Corrigent, do not receive any revenues from these lawsuits or licensing. Correct?

A. I don't know.

THE COURT: Approach the bench, counsel.

(The following was had outside the hearing of the jury.)

THE COURT: What's the relevance of this, Mr. Dacus? We are not going to get into litigation funding --

MR. DACUS: No, sir.

THE COURT: -- and financing.

MR. DACUS: Absolutely not. Your Honor, they've left the impression that these monies are going back to the Orckit-Corrigent and those folks when, in fact, they're going to this one entity Orckit IP which is Mr. Binder and Mr. Tamir.

So we -- this goes to the bias of Mr. Tamir. He testified yesterday, we don't think he testified completely and accurately, and that's the purpose of this questioning. It's to eventually show he is getting more than he testified to.

THE COURT: Well, all right. As to Mr. Tamir, I think there is relevance as to his interest and perhaps level

of bias, but this is going to get too far afield if we're not very strategic and targeted on what you do.

MR. DACUS: Understood.

THE COURT: If you want to try this -- try to tie this to Mr. Tamir, do so and let's move on, but we're not going to dwell on this any longer.

MR. DACUS: Understood.

THE COURT: Okay?

MR. DACUS: Yes, sir.

(The following was had in the presence and hearing of the jury.)

THE COURT: Let's proceed.

MR. DACUS: Thank you, Your Honor.

Q. (BY MR. DACUS) You were here yesterday, sir, when Mr. Tamir said he acquired the residual from the bankruptcy court. Correct?

A. I was.

Q. That in short terms and to be fair means he's going to get money from any licensing or lawsuits. Correct?

A. That was my understanding of his testimony, yes.

Q. That's what that residual is. Correct?

A. I believe so, yes.

Q. And I think he said he's going to get -- he has the chance to get $4 million in order to obtain everything he asked for in this case. Correct?

A. I know that he wasn't completely sure about the math, but I'm assuming you've got it calculated correctly. He ends up with 10 percent, I believe.

Q. But you know, sir, that he's actually -- has the potential to receive more than what he testified to. Correct?

MR. LIDDLE: Objection; relevance.

THE COURT: Overruled.

THE WITNESS: I actually don't know.

Q. (BY MR. DACUS) You know, sir, that he and Mr. Binder, who he put up as the front man for Orckit IP, they have a handshake deal on the side where Mr. Tamir is actually going to get money over and above what he testified to this jury about. Correct?

A. I don't know what handshake deal they have.

Q. You don't deny that they have one, do you, sir?

A. I don't know one way or the other.

Q. Have you -- you know Mr. Binder's deposition was taken in this case?

MR. LIDDLE: Objection; relevance.

THE COURT: I think we need to move on. These are questions that could have been asked of Mr. Tamir yesterday and they weren't. This is all about his interest in the outcome of the case. He's off the witness stand and to my knowledge is not due to be called back.

We need to move on, counsel.

MR. DACUS: Thank you, Your Honor.

Q. (BY MR. DACUS) Now, you understand, sir, that Orckit-Corrigent was in the DSL or modem business at one point in time. Correct?

A. At one point in time, yes.

Q. And then when that business started to decline in 2000, they attempted to reinvent themselves. Correct?

A. Yes.

Q. And you know because you said you've been in the networking business for many years that, by the year 2000, routers had been made by U.S. companies for the better part of a decade. Correct?

A. I actually don't know that. I started working as an attorney in 1999, so I would not have been aware of what had happened in the previous decade.

Q. So do you know the company Cisco, C-I-S-C-O?

A. Yes, I'm familiar with that company.

Q. Are you old enough to know that that was one of the preeminent, if not the most preeminent, technology companies in the country as of 2000?

A. I know that they're a preeminent company now. I don't know what their status was in 2000. I know that they were involved in various technologies because of other litigations.

Q. Did you know that they had been making routers in the United States for over a decade at that point?

A. I am not aware of their history in that detail, no.
Q. You never worked at Orckit-Corrigent. Correct?
A. I did not.
Q. You had no relationship with Orckit-Corrigent while it was an operating company. Correct?
A. I did not.
Q. You didn't talk with any of the inventors on these patents before you filed this lawsuit, did you, sir?
A. I'm not sure, but I don't think so.
Q. You don't know why -- how or why any of the alleged inventions in these patents were conceived, do you?
A. I would disagree with that.
Q. You have a notebook in front of you, sir.
A. Sure.
Q. And one of them is your deposition. And if you would turn to page 163, let me know when you're there.
A. I'm sorry. This binder, the depositions' binder?
Q. Yes, sir.
A. Okay.
Q. You remember you gave a deposition under oath in this case. Correct?
A. I did.
Q. Can you look at page 163, lines 3 through 5, please? Let me know when you've had a chance to read that.
A. I see that, yes.

Q. Does that remind you, sir, that under oath you said you do not have an understanding of how the alleged inventions of these patents were conceived?
A. It does. I thought your question was broader than that.
Q. You know that inventors often have notes or notebooks when they create inventions. Correct?
A. Depends on the company.
Q. You've not looked at any notes or notebooks related to these particular inventions. Correct?
A. I don't recall looking at many notebooks.
Q. And it's true, sir, that the inventors on these patents will not receive any monies from licensing or this lawsuit. Correct?

MR. LIDDLE: Objection, relevance.

THE COURT: Sustained.

Q. (BY MR. DACUS) You were here, sir, yesterday when Mr. Tamir said to this jury that Orckit-Corrigent was sort of his life's work and his baby. Correct?
A. Yes.
Q. And you remember that he said to this jury that he didn't form Orckit IP and buy these patents just for money. That's what he said. Right?
A. I believe that's what he said.
Q. And he said he -- at least what he told the jury was that he was doing this to get justice for Orckit-Corrigent. You

remember that?
A. Yes.
Q. So it's true, sir, that neither Orckit-Corrigent nor the inventors at Orckit-Corrigent are going to get one penny from this lawsuit. Correct?
MR. LIDDLE: Objection; relevance.
THE COURT: I'll overrule the objection.
THE WITNESS: I don't know how the money from Orckit IP is being distributed.
Q. (BY MR. DACUS) You certainly know that Smart Path hasn't agreed to give the inventors or Orckit-Corrigent one penny, have you, sir?
A. I don't think Orckit-Corrigent exists. But, no, we haven't agreed to give anybody money that falls into those categories.
Q. You know the ownership of Orckit IP is completely separate from what the ownership of Orckit-Corrigent was. Correct?
A. I don't.
Q. You've participated in trial proceedings before. Correct?
A. I have.
Q. You heard the Judge tell the jury that they need to exercise and use their common sense in this case. Correct? In his preliminary instructions.

A. I'm sure that there's something along those lines, yes.
Q. I mean, you agree the jury should use their common sense. Correct?
A. Of course.
Q. So I want to make sure I and the jury understand the facts regarding Orckit before we switch to just Smart Path. Okay? Is that fair?
A. Sure.
Q. Okay. Now, post 2000, at the time that Orckit's attempting to reinvent themselves, they tried to sell products using their technology. Correct?
A. I really don't have any knowledge of what they were doing at that time.
Q. So do you --

MR. LIDDLE: Your Honor, can we approach?

THE COURT: Approach the bench.

(The following was had outside the hearing of the jury.)

MR. LIDDLE: Your Honor, I don't know what we're doing. Izhak Tamir already testified all these questions. He's already left the witness stand. He doesn't have any knowledge of what Orckit-Corrigent was doing in the year 2000.

THE COURT: I think we've beaten this horse enough, Mr. Dacus, unless you can convince me there's something here that's relevant that's not been covered.

MR. DACUS: It's a new topic, Your Honor.

THE COURT: It doesn't sound like a new topic.

MR. DACUS: It may not have, but it will very quickly.

THE COURT: Well, if you want to examine this witness about Smart Path that he controls and owns, I think that's relevant. What's happened in the past with Orckit and Orckit-Corrigent, those are questions Mr. Tamir should have been asked yesterday.

By the way, Mr. Liddle, where is Mr. Tamir? No one asked for him to be excused yesterday. I hope he's not on his way back to Israel.

MR. LIDDLE: No, Your Honor. He's still here.

THE COURT: Is he going to be recalled in a rebuttal case?

MR. LIDDLE: I don't think so.

THE COURT: Okay. Well, I just want to be clear that you need to have him excused, which I'm happy to do, but you need to have him excused before he leaves the area.

MR. LIDDLE: Yes, Your Honor.

THE COURT: All right. Let's move on, Mr. Dacus.

MR. DACUS: Thank you, Your Honor.

(The following was had in the presence and hearing of the jury.)

THE COURT: Let's proceed.

MR. DACUS: Thank you, Your Honor.

Q. (BY MR. DACUS) When Smart Path, the company that is you, acquired the patents from Orckit IP, you didn't pay any money. Correct?

A. That's correct.

Q. What Smart Path and you did agree to do and promised to do is bring a lawsuit within a certain period of time. Correct?

A. Yes.

Q. And Smart Path was a company that was formed in 2020 at the time that you acquired these Orckit IP patents. Correct?

A. Well, it was formed before we acquired them, I believe, but, yes, roughly contemporaneously.

Q. When you say before, you mean in the hours or days before. Correct?

A. I don't know the exact timeline, but it was before.

Q. Smart Path, to be clear, sir, has no employees. Right?

A. No. Other than myself, there's no one who works at Smart Path.

Q. Smart Path does not sell a product. Correct?

A. They do not.

Q. Has never made a product. Correct?

A. That's correct.

Q. Doesn't perform any research and development activities. Correct?

A. No.
Q. Smart Path has an office in Plano, Texas. Correct?
A. Yes.
Q. And you've never been there. Correct?
A. That's incorrect.
Q. Well, as of the time that we took your deposition just a few months ago, you had never been to that office. Correct?
A. I actually didn't recall, but I had been there before and I have been there since.
Q. So you've been there a couple of times. Correct?
A. A few times, yes.
Q. So to make sure we understand, you heard the Judge tell the jury that one thing they should do in assessing witnesses is determine whether or not they have a financial interest in the case. Correct?
A. Yes.
Q. And so what we know is you're here attempting to get 10 to 15 percent of whatever the jury might award. Correct?
A. That's right.
Q. And then Orckit IP is getting 42 percent. Correct?
A. That's right.
Q. Some portion of which Mr. Tamir is getting. Fair?
A. That's fair.
Q. So between you and Orckit IP, that's somewhere between 52 and 57 percent of what this jury is being asked to award.

Correct?

A. That sounds right.

Q. The Orckit-Corrigent inventors, creditors, investors, are getting zero. Fair?

A. I don't know.

MR. DACUS: May I have the document camera, Ms. Brunson? Thank you.

Q. (BY MR. DACUS) You told the jury a minute ago--I'm not sure if you showed them this slide or not--that you believed and part of your research that Orckit-Corrigent had received awards. Do you remember telling them that, sir?

A. I know -- yes, generally speaking.

Q. Were you intending to leave the jury with the impression that these awards that you were talking about related to their business after 2000 when they were reinventing themselves or before when they were a modem company?

A. What I recall saying was that they were a contributor in the networking router space.

Q. So let's be -- does it sound fair to be very clear with the jury about what these awards related to, sir?

A. Absolutely.

Q. Okay. When it -- the third bullet point says, named top innovator in 2005 by IEEE Spectrum. You know that that award in 2005 related to work in 1993 and 1996 when they were a modem company. Correct?

A. I did, which was why we didn't show this slide.
Q. Okay. So just so the record's clear and the jury's clear, these awards you're talking about relate to the time period when Orckit-Corrigent was a modem company. That is a true statement. Correct?
A. That award certainly does. I don't know about all of their awards.
Q. And when it says Orckit was recognized as a leading contributor to the IEEE, that's a standard-setting body related to their modem business. Correct?
A. That's not my understanding.
Q. You know, sir, here that the standards at issue here are from another body called IETF. Correct?
A. I disagree with that.
Q. You don't know that?
A. There are numerous standard-setting organizations. The IEEE is one of them. The IETF is another.
Q. You would agree, sir, that when you were saying to the jury that contributions were made to the IEEE, those contributions were made related to the modem business. Correct?
A. That's not my understanding.
Q. Okay.
MR. DACUS: Mr. Carrillo, can you pull up PX 5, please?

Q. (BY MR. DACUS) You remember referencing this letter February of 2017 to Nokia, sir?
A. I do.
Q. You understand, sir, that this letter only specifically references the '508 Patent. Correct? You see that right there?
A. This page does, but I believe there are more pages to the letter that reference the other patents.
Q. The only --
MR. DACUS: Can you show the second page of this?
Q. (BY MR. DACUS) Do you see this letter is signed by Mr. Ibrahim Hallaj?
A. I do.
Q. It was written on behalf of Orckit IP. Correct?
A. It was.
Q. And if we go back to the first page, you know that this '508 Patent that was referenced in this letter is not part of this lawsuit. Correct?
A. I do.
Q. And you know that the products that were identified in this letter, these switches, are not part of this lawsuit. Correct?
A. I actually don't know the full extent of the switches involved, but I'll take your word for it.
Q. You don't have any evidence to present to this jury that

the products identified in Plaintiff's Exhibit 5 are products that are accused in this case, do you, sir?

A. I don't know.

Q. Indeed, sir, do you know that the products identified in Plaintiff's Exhibit 5 are actually not even Nokia products?

A. I don't know -- I don't know.

MR. DACUS: You can take that down, Mr. Carrillo.

Q. (BY MR. DACUS) Let me ask you this, Mr. Pitcock. You know that this jury is here to answer the question about whether or not Nokia infringes this patent. Correct?

A. That's right.

Q. And you, sir, have not offered any evidence and done any analysis to determine infringement. Correct?

A. I'm not offering any evidence of infringement to the jury.

Q. Okay. You, sir, know that this jury's here to answer the question of invalidity of these three patents. Correct?

A. I do.

Q. You're not offering any testimony to this jury on the topic of invalidity, are you, sir?

A. I'm not.

Q. And if they were to get to it, the jury's going to answer the question of what a reasonable royalty or damages are. Correct?

A. Absolutely.

Q. And you're not here to offer any testimony on the amount of the reasonable royalty, are you, sir?
A. I am not.
Q. So as to those three questions, you've not testified or offered any evidence to this jury on those three questions. Correct?
A. Nothing for the jury to consider, that's correct.
MR. DACUS: That's all I have, Your Honor. I pass the witness.
THE COURT: Is there redirect?
MR. LIDDLE: No further questions, Your Honor.
THE COURT: All right. You may step down, Mr. Pitcock.
Plaintiff, call your next witness.
MR. BENNETT: Plaintiff calls Mr. Valley.
THE COURT: All right. If you'll come forward and be sworn, please.
(Whereupon, the oath was administered by the Clerk.)
THE COURT: Please have a seat on the witness stand.
MR. BENNETT: Your Honor, may I approach with a notebook?
THE COURT: You may.
All right. You may proceed with direct examination, counsel.
MR. BENNETT: Thank you, Your Honor.

JEFFREY VALLEY,

having been duly sworn, testified under oath as follows:

DIRECT EXAMINATION

BY MR. BENNETT:

Q. Good morning, Mr. Valley. Please introduce yourself.

A. My name is Jeffrey Valley.

Q. You're the VP of IP networks for North America of Nokia. Right?

A. I am.

Q. But your internal title is portfolio solutioning specialist. Right?

A. We have a job catalog in Nokia that identifies roles, so that is an internal entry in my job catalog, yes.

Q. Okay. Tell us what a portfolio solutioning specialist does.

A. My job is specifically related to presales business development, so it's managing the -- the IP business as -- as it's customer facing, making sure that we're making good decisions in -- in deals. I handle the regional product management functions in my organization as well, and I also handle tendering, so responding to customer RFPs, RFIs, that sort of thing.

Q. And for the jury's benefit, an RFP is a request for proposal?

A. That is correct.

Q. And that is where another business will elicit offers or -- or requests for services or equipment or things from another business.
A. That's correct.
Q. And so Nokia will often receive a request for proposal from a potential customer. Right?
A. Yes.
Q. And then you'll help put in the pieces that fill in the particulars that the potential customer or customers is requesting?
A. I have a team of people that work for me that answer those RFPs, yes.
Q. And some of those RFPs deal with networking. Right?
A. My scope is the networking business, so the only Nokia's RFPs that my team would answer are specific to the networking business, yes.
Q. And upon receiving an RFP from a customer, potential customer, you or your team will make a recommendation about how to build out a network.
A. It's possible that that would be contained in an executive summary as an example. Normally RFPs are point-by-point responses where we're answering yes or no to specific technologies.
Q. Answering yes or no to specific technology. Help us understand what that means, please, Mr. Valley.

A. So a request for proposal or a request for information will typically have a list of standards, for example, or functionalities, and we will go through and check yes or no, or, you know, sometimes give a forward-looking date of when a feature may be supported, just in the interest of helping a customer understand the difference between multiple responses that they'll get from different vendors.

Q. All right. And the decision about what features a customer may implement can happen in a couple of ways. One could be it's customer driven, the customer tells you what they want. Right?

A. That is the way -- that's a primary way.

Q. All right. And then the other is Nokia can approach the customer and tell them what Nokia thinks should be used.

A. No, I disagree with the characterization.

Q. There are sometimes when Nokia observes or sees what a customer uses and then will provide feedback or information to the customer's product manager about what Nokia would recommend the customer use.

A. Certainly in conversations with customers, we have very fluid conversations about the state of the technology improvements that could be made. So, yes, I agree with that.

Q. And part of the services that network -- Nokia provides is network integration?

A. Network integration is a service that is provided by

Nokia, yes.

Q. And Nokia can also assist in configuring networks?

A. As a service, yes.

Q. And I believe you said you're -- if I heard you correctly, that you're with the Regional Business Center. Is that right?

A. Yes. So we have an internal organization called a Regional Business Center. And under that, there's an organization called the IP Business Center, and the IP Business Center in our organization is responsible for the tasks that we've already outlined.

Q. And your organization with the Regional Business Center has network integration engineers who deliver services to customers?

A. Network integration engineers for the accused products do not work for me, but they are in the RBC, so it's an adjacent organization.

Q. And the network integration engineers are the ones who may configure some of the products at issue in this case. Right?

A. Yes, they can do that.

Q. Now, kind of talking about those products generally, these routers that are at issue in the case, the accused products in the case, allow for multiple functionalities. Right?

A. Yes, sir.
Q. And those multiple functionalities are described in product manuals.
A. They are.
Q. These product manuals discuss all of the different ways that a product can be configured.
A. They do.
Q. And in creating a product manual, Nokia looks for the offerings or the services or the features that it thinks its customers will want to use. Right?
A. No, I have to disagree with the phrasing of the question.
Q. Okay. When Nokia's going to write a manual, it wants to write a manual that will be helpful to customers?
A. Correct.
Q. Okay. And in providing instruction to a customer about how best to use the features that each product provides.
A. About how to use the feature.
Q. Is that right?
A. You said best use the feature. I'm saying that it's how to use the feature. A manual shows them how to use the feature. It doesn't necessarily make a recommendation about how to do it best. There's a -- you know, an engineering process involved there.
Q. All right. And if there is a feature on a product that is configurable within the product, the product manual will

tell the user how to configure that feature.

A. Yes.

MR. BENNETT: I'd like to just go to, Mr. Jarrett, Plaintiff's Exhibit 1-1, please.

Q. (BY MR. BENNETT) I'm just going to show you a couple of pages from the overhead.

MR. BENNETT: Thank you.

Q. (BY MR. BENNETT) Now, I'm not showing -- let me back up. These manuals can be pretty lengthy. Right?

A. They absolutely can.

Q. I've seen manuals as long as 2,000 pages.

A. That's reasonable.

Q. All right. So I'm not going to put the whole 2,000-page manual up on the elmo just to give the jury an understanding of what we're talking about.

A. And I thank you for that.

Q. Okay. This is the front cover or one of the first pages of this particular manual, which has been marked Plaintiff's Exhibit 1-1. Do you recognize it?

A. I do.

Q. All right. And the particular products that we see here, the 7450, the 7750, those are some of the products that are at issue in this case. Right?

A. That is correct.

Q. And the manual or other manuals like this one would

instruct users on how to use the features that each product offers. Right?

A. That those specific products offer, correct.

Q. And including some of the features that are at issue in this case.

A. Yes.

Q. And Nokia intends to offer -- or provides these manuals for the intended use of Nokia's customers.

A. Yes, and employees and anybody else that's interested.

MR. BENNETT: Your Honor, at this time we may need to seal the courtroom because I'm going to use a configuration file.

THE COURT: All right. Based on counsel's request to protect confidential information, I'll order the courtroom sealed and I'll direct that all persons present who are not subject to the protective order in this case should excuse themselves and remain outside the courtroom until it's reopened and unsealed.

(Courtroom sealed.)

(Courtroom unsealed.)

THE COURT: All right, counsel. Continue, please.

MR. BENNETT: Thank you, Your Honor.

Let's try it this time. Mr. Jarrett, Plaintiff's Exhibit 8, please.

Q. (BY MR. BENNETT) All right. You were here in the courtroom yesterday when this document was discussed. Correct, Mr. Valley?

A. Yes, sir.

Q. This is the purchase agreement between Nokia Siemens Networks and Corrigent Systems, Limited. Do you remember that?

A. Yes, sir.

MR. BENNETT: Mr. Jarrett, if you'd turn to page 1856 of the document -- or page 38, perhaps of the PDF. All right. Zoom in, if you would, please, under the signatures and the dates there.

Q. (BY MR. BENNETT) So this is a document that Nokia executed in August of 2009 with Corrigent Systems. Right?

A. It looks so, yes.

Q. All right. And under this document Nokia Siemens would purchase products licensed in an attachment, which we'll look at in a second, and resell them in India. Right? Or install them in India.

A. I don't know. I can't answer that.

MR. BENNETT: Okay. Let's just look at the next page, Mr. Jarrett.

Q. (BY MR. BENNETT) Attachment 1 on prices, you were here when Mr. Tamir testified that many of the products sold under this contract included the CM-4000 family.

MR. BENNETT: So, Mr. Jarrett, if you'd highlight line 7.3.

Q. (BY MR. BENNETT) You heard the testimony?

A. I heard the testimony yesterday, yes.

THE COURT: Mr. Bennett, can you slow down a bit?

MR. BENNETT: Sure.

THE COURT: Please do.

MR. BENNETT: Thank you.

Q. (BY MR. BENNETT) All right. And so Nokia was in possession of CM-4000 series products at least sometime around the time of this contract in 2009. Right?

A. I can assume so.

Q. Okay. And you also heard Mr. Tamir's testimony and watched as we discussed documents about marking.

MR. BENNETT: You can take that down, Mr. Jarrett. Thank you.

Q. (BY MR. BENNETT) As we discussed his marking program and the documents that showed marking at least by 2009. Right?

A. I recall the testimony.

Q. All right. In fact, he talked about how his marking program had extended back in the early 2000s. Do you remember that testimony, too?

A. I recall his testimony.

Q. And so Nokia was buying product from Orckit-Corrigent in 2009 around about the same time as those documents we looked at. Right?

A. Yeah, I agree. I agree.

Q. And so Nokia would have been in possession of those same products about the same time as those marking documents.

A. I don't think I can agree with exactly that, no.

Q. Do you know one way or the other? Let me ask it this way. Can you tell this jury that you know under oath that Nokia didn't possess the products at least around 2009 about

the same time of those marking documents?
A. No, sir. But I understand that this was a resell agreement and that means it could have simply been passed through. Any work that Nokia did with the document, I can't answer.
MR. BENNETT: Your Honor, I object as non-responsive.
THE COURT: The witness answered the question when he said, no, sir. I'll retain that portion of the answer as responsive. The remainder of the answer goes beyond the question, is non-responsive, and I'll strike that.
Q. (BY MR. BENNETT) And it is the case, Mr. Valley, that you have no evidence to contradict Mr. Tamir's testimony that Orckit-Corrigent markets CM-4000 products the entire time that they were in service.
A. I have no idea.
Q. And you also have no evidence that the CM-401x was ever sold in the United States?
A. I have no evidence personally.
Q. Was ever offered for sale in the United States?
A. I have no evidence.
Q. Or was ever imported into the United States?
A. I also have no evidence.
MR. BENNETT: Mr. Jarrett, will you please bring back Plaintiff's Exhibit 5?

Q. (BY MR. BENNETT) You also have no evidence, Mr. Valley, to contradict anything we just heard about Plaintiff's Exhibit 5, namely, that after Orckit IP offered a license to Nokia for some patent, that Nokia never responded.
A. No, that is correct that Nokia never responded, to my knowledge.
Q. And you don't dispute that listed within the schedules attached to that letter are the patents-at-issue in this case.
A. I don't dispute that, no.
Q. All right. I'm going to shift topics now. We keep hearing about standard-settings bodies. You're familiar with those in your line of work. Right?
A. I am.
Q. We've heard about the IETF. Are you familiar with that group?
A. Yes, sir.
Q. Who is the IETF?
A. IETF is the Internet Engineering Task Force.
Q. And what's the purpose of the IETF?
A. The IETF is in charge of standardization. It issues standardization drafts and then standardization RFCs which are followed in this industry.
Q. All right. Now, we've heard some assertions made during the course of this case by your side that Orckit-Corrigent didn't participate in the IETF. You've heard those

assertions.
A. I don't recall exactly, but -- I don't recall.
Q. Well, Mr. Dacus about 10 minutes ago stood at this podium and asked Mr. Pitcock several questions about whether Orckit-Corrigent was participating with IETF or IEEE. Do you remember that?
A. I remember the context, yes.
Q. Okay. Are you familiar with the documents that the IETF generates?
A. Yes.
Q. And would you have been reviewing those documents, the papers and the standards that the IETF generates, as early as 2012?
A. Yes.
Q. As early as 2011?
A. Yes.
Q. Did you know that Orckit-Corrigent submitted several submissions to the IETF during that time period?
A. I didn't, no.
Q. Despite the assertions that your side has made to the contrary. Did you know that?
A. Again, I don't recall that.
Q. Why don't you pull up the -- the white binder that's in front of you. There's some tabs.
A. Yes.

Q. One of the tabs should be called Memo 1/4/12?
A. Okay. I have it.
Q. All right. And would you just briefly review the first page there and let me know when you're ready to talk about it?
A. Okay. I've reviewed it.
Q. All right. The title -- or the working group that created this is the MPLS working group. Right?
A. That's correct.
Q. All right. MPLS, that has to do with networking. Right?
A. It does.
Q. And this is from the IETF. Right?
A. This is an IETF document, yes.
Q. Who are the -- at the very top of the page, please read the names that you see, the first three lines.
A. DCon, DRam, Orckit-Corrigent.
Q. And can you please identify the title of the document that's bolded in the middle of the page?
A. Yes. MPLS-TP Linear Protection Applicability to MSPW and then the document name.
Q. Now, I've got a Bachelor of Arts degree, but I don't think -- does that -- as you read that, that doesn't strike me as modem language. It -- does it?
A. No, this is not related to modems.
Q. Should have another tab that's labeled Memo 5/31/11. Please turn there. Are you there?

A. Yes.
Q. All right. This is another draft from the MPLS working group. Right?
A. It is.
Q. All right. And it's -- the title of this paper is SD Detection and Protection Triggering MPLS-TP. Do you see that?
A. I do.
Q. And could you please identify the first three lines in the top right-hand corner of that document.
A. Yes. Again, DRam DCon, Orckit-Corrigent.

THE COURT: Counsel, are you intending to show this on the monitor? Or are you intending to talk about it without anybody in the room being able to see it except you and the witness?

MR. BENNETT: I'm happy to publish it, Your Honor. I'm just impeaching the assertion.

THE COURT: All right. Mr. Haynes?

MR. HAYNES: Your Honor, this is not an exhibit in this case. It's not been pre-admitted, and I don't think he should be publishing it.

THE COURT: If it's used for impeachment, it doesn't have to be a pre-admitted exhibit, but the -- counsel is going to need to clarify exactly what he's intending to do here.

MR. BENNETT: I'm just intending to clarify the record on this one particular issue. I'm not intending to

submit them to the jury.

THE COURT: Are you attempting to impeach the witness?

MR. BENNETT: Yes.

THE COURT: All right. Then I'll overrule the objection as to the document not being pre-admitted and you can continue with that effort.

MR. BENNETT: Thank you, Your Honor.

Q. (BY MR. BENNETT) So I'll repeat one more time, the top right-hand corner, who you see?

A. DRam --

THE COURT: Just a minute.

MR. HAYNES: Your Honor, may I approach?

THE COURT: Approach the bench.

(The following was had outside the hearing of the jury.)

MR. HAYNES: Your Honor, he asked this witness if he was aware of them submitting proposals to IETF. He said he didn't know. This is not impeachment. He's not impeaching. He said he doesn't know. Now he's showing documents he's never seen before --

THE COURT: He hasn't been shown anything yet. He's been asking questions about something nobody can see.

What are you doing here, Mr. Bennett?

MR. BENNETT: I'm impeaching the assertion that

Orckit-Corrigent wasn't participating or submitting standards to the IETF. That assertion's made several times in this proceeding. I will publish them. I have no problem doing that. But I am impeaching the assertion that Nokia has made only maybe 15 minutes ago that this -- that what we're seeing, we shouldn't be seeing.

THE COURT: Well --

MR. BENNETT: Or will see.

THE COURT: I have no problem with you impeaching the witness with any prior inconsistent statement. And since he's corporate rep for Nokia, any prior inconsistent statement of Nokia is adequate to form the basis of impeachment. But once you refresh his recollection, you need to ask him the question, not publish the material.

MR. BENNETT: Okay.

THE COURT: And if he answers the question consistent with the prior statement that's contrary to the document, then you can ask for leave to publish it to the jury to show that it's an inconsistent answer.

MR. BENNETT: Understood.

THE COURT: Now, I don't have this document in front of me, so I'm not sure I'm going to know whether his answer is consistent or inconsistent, but I'll let you continue with your efforts to impeach him.

MR. BENNETT: Okay.

THE COURT: All right?

MR. BENNETT: Thank you.

MR. HAYNES: Thank you, Your Honor.

THE COURT: All right.

(The following was had in the presence and hearing of the jury.)

THE COURT: Let's proceed.

Q. (BY MR. BENNETT) All right. Looking at this last memo, which is February 13, 2012, let me ask it this way. Is what you see in this last document, top right-hand corner, is it consistent with the assertion that's been made by your side that Orckit-Corrigent didn't participate in the IETF?

A. It is not consistent, no.

Q. And does Nokia stand by its assertion, its previous assertion, that Orckit-Corrigent didn't participate in the IETF given what you see here?

A. Again, looking at this document, it appears to me as if they did participate.

MR. BENNETT: Your Honor, I object as non-responsive.

THE COURT: I think it was responsive. Overruled. He said they did participate.

MR. BENNETT: Okay.

Q. (BY MR. BENNETT) Let me ask maybe a slightly different question, the question I thought I asked. Does Nokia stand

behind the statement it has made several times during this proceeding, after seeing this, that Orckit-Corrigent did not participate in the IETF?

A. I don't know what to say. I can't -- it appears as if they have.

THE COURT: It appears as if who has?

THE WITNESS: It appears as if Orckit-Corrigent participated, submitted documents to IETF.

THE COURT: And in light of that appearance, does Nokia maintain its position that they didn't?

THE WITNESS: No, sir.

THE COURT: Okay. Let's move on.

MR. BENNETT: I'll pass, Your Honor.

THE COURT: All right. Cross examination.

I'll tell you what, Mr. Haynes. This is going to be a lengthy cross examination as I understand it. We've been in the courtroom since 8:30. We're going to take about a 10-minute recess, we'll come back, then we'll move to cross examination of Mr. Valley.

Ladies and gentlemen of the jury, you may simply close and leave your notebooks in your chairs, if you like. Follow all my instructions about your conduct, including not to discuss the case with each other, and we'll be back shortly to continue with this witness.

The jury's excused for recess.

(Whereupon, the jury left the courtroom.)

THE COURT: Court stands in recess.

(Brief recess.)

THE COURT: Be seated, please.

Counsel, before I bring the jury in and we proceed with cross examination, which, given that Mr. Valley is Nokia's corporate representative at this trial, will need to be in the form of a non-leading direct, but, nonetheless, I think counsel understands that.

We met this morning in chambers with regard to certain overnight disputes. I carried one of those which came in early this morning regarding slides 42, 48, and 72. The objection had to do with the application of an order entered by Judge Payne through the pretrial process with regard to striking certain provisions and paragraphs regarding Doctor Valerdi's slides and his report.

And I've considered the slides that have been offered, I've considered the objections and the discussion that we had in chambers. I told you this morning I'd carry this after I -- until I have the chance to review the impact and the application of Judge Payne's order more thoroughly.

I've done that, and I'm going to overrule the objections to these slides. I think they're permissible. I think they're outside the scope of what Judge Payne struck. So that's the ruling on those.

All right. Let's bring in the jury, please.

(Whereupon, the jury entered the courtroom.)

THE COURT: Please be seated.

All right. We'll proceed with cross examination of Mr. Valley by Defendant Nokia.

You may proceed, Mr. Haynes.

CROSS EXAMINATION

BY MR. HAYNES:

Q. Good afternoon, Mr. Valley.

A. Good morning.

Q. Actually good morning.

Right before we broke, you were asked some questions about some documents relating to the IETF. Do you recall that?

A. I do.

Q. And there were some statements made about Nokia's positions relating to the IETF. Do you recall that?

A. I do.

Q. Were you here when Mr. Dacus talked about how Orckit was a latecomer to the routing business?

A. Yes, I was.

Q. Do you recall that the three patents in this case were all invented and filed prior to 2005?

A. I do recall that, yes.

Q. And have you looked at some of the IETF standards that

are at issue in this case with relation to Nokia's products?
A. I'm not sure I understand the question.
Q. For example, did you look at one of the IETF standards, RFC 4875?
A. Oh, of course, yes.
Q. And do you recall what the date was when RFC 4875 came about?
A. In the 2000s.
Q. The early 2000s?
A. The early 2000s, yes.
Q. Now, the documents that you were showed, what was the earliest date of those documents that involved Orckit and IETF?
A. I believe it was 2011.
Q. Okay. Now, I want to back up and just learn a little bit more about you.
A. Okay.
Q. Can you just tell the jury where you live?
A. I live in just outside of Atlanta, Georgia.
Q. And do you live there with your family?
A. I live with my wife. We have three grown children.
Q. And where did you go to college?
A. I went to Heriot-Watt University in Edinburgh, Scotland.
Q. And did you get a degree from there?
A. I did, a master of science degree.

Q. Okay. And for about how long have you been working in the industry of computer networking?
A. Over 15 years with this product line. Probably 20 years total since 1996.
Q. Okay. And what was the first job that you held in the computer networking area?
A. The first job with a manufacturer was with Cabletron Systems in late 1990s.
Q. What types of products did Cabletron sell?
A. Cabletron was in the business of selling hubs, ethernet hubs, ethernet switches, some various other layer 2 technologies that were applicable at the time. And while I was there, they acquired a Silicon Valley start-up that made routers.
Q. And at some point did that company Cabletron split up into other companies?
A. It did.
Q. And did you end up working for one of the companies that got split off?
A. I did. They split up into four companies, and one of those spin-offs was named Riverstone Networks, and my employment transferred to Riverstone Networks.
Q. Okay. And what kind of products did you work on at Riverstone?
A. Metro ethernet routers.

Q. Okay. And at some point did Riverstone get acquired?
A. Yes, sir. Riverstone Networks' assets were acquired by Lucent Technologies. That was in 2006.
Q. And when it was acquired by Lucent Technologies, did you keep working for Lucent Technologies?
A. I was offered employment as were I think almost all of the Riverstone employees with Lucent Technologies at that time.
Q. And what kind of products were you working on when you were at Lucent Technologies?
A. The same products. Lucent kept the organization that I was in in a dedicated organization to support metro ethernet routing because they didn't have a talent -- they didn't have their own talent base.
Q. Okay. And at some point in time did Lucent Technologies merge with a company called Alcatel?
A. Yes. Alcatel and Lucent merged, I believe, in 2007.
Q. Okay. And that company called Alcatel Lucent?
A. Creatively they called it Alcatel Lucent, yes.
Q. After that merger happened, what kind of products were you working on?
A. So when that merger happened, I was almost immediately introduced to Alcatel's IP organization, and I had -- I made several contacts there, and I was offered to move on to that team in 2007.

Q. Okay. So what role did you hold at Alcatel Lucent?
A. At Alcatel Lucent, I held a network architecture principal consulting engineer role at the beginning in 2007.
Q. Okay. And what products were you working on at Alcatel Lucent?
A. The 7X50 routing family.
Q. Okay. Is that the same 7X50 routing family that has been accused of infringement in this case?
A. It is.
Q. Did you stay in the same role at Alcatel Lucent the whole time you were there or did you take on different responsibilities?
A. I stayed in that role until around 2010. In 2010 I was offered a role leading a piece of the organization as a -- as a director.
Q. Okay. And what was your role -- what were your responsibilities as a director in that organization?
A. Business development, presales technical support. I was responsible specifically for selling these products or supporting the sale of these products toward mobile network operators--AT&T, Verizon, T-Mobile, Sprint at the time--as well as -- and then eventually shortly thereafter to the cable network operators--Comcast, Cox, Charter, Brighthouse.
Q. And at some point in time did Nokia acquire Alcatel Lucent?

A. Nokia acquired Alcatel Lucent, yes, sir, in 2016.
Q. And did you remain with Nokia after that acquisition?
A. I did.
Q. And what were your job responsibilities at Nokia after it acquired Alcatel?
A. With that acquisition, my responsibilities and the function of my organization did not change.
Q. Okay. Can you -- and what was your title when you first started out at Nokia?
A. At Nokia, I was a senior director, I believe it was, of IP consulting engineering. Every time there's a reorganization, there's a name change so it gets hard to keep track of. But I believe I was senior director of consulting engineering, IP consulting engineering.
Q. Okay. And for about how long were you in that role at Nokia?
A. I stayed in that role until 2018.
Q. Okay. And what role did you take on in 2018?
A. In 2018 I was asked to take over that same responsibility but for all customers in North America.
Q. Okay. And at what point did you get promoted to the vice president of IP networks for North America?
A. I became a Nokia executive, it was after COVID. I'd have to look up the exact date, 2021, 2022, in that time frame.
Q. And what products are you responsible for at Nokia as the

vice president of IP networks?
A. I'm responsible for all of the products in the IP networks business unit. That includes the 7X50s, the routers and switches in the portfolio, as well as some of the software that supports those hardware products.
Q. Now, Mr. Valley, you're here as Nokia's corporate representative. Is that right?
A. Yes, sir.
Q. And what do you understand your role to be as a corporate representative?
A. I'm representing Nokia in the case.
Q. And you understand that you are here because Nokia has been accused of patent infringement.
MR. BENNETT: Objection; leading.
THE COURT: Restate the question, counsel.
Q. (BY MR. HAYNES) Mr. Valley, why are you here?
A. I'm here to speak for Nokia in response to this lawsuit that was filed.
Q. Now, does Nokia as a company take allegations of patent infringement seriously?
A. Very seriously, yes, sir.
Q. And are you aware that Smart Path has alleged in this case that Nokia is willfully infringing Smart Path's patents?
MR. BENNETT: Objection; leading, foundation.
THE COURT: He's the corporate representative. He

can certainly set forth what the company's position is. Overruled.

THE WITNESS: I am aware of the accusation, yes, sir.

Q. (BY MR. HAYNES) And does Nokia have a position on whether it is infringing Smart Path's patents in this case?

A. Yes, sir. Nokia's position is that we are not infringing on these patents.

Q. And do you have any reason to believe based on your personal knowledge that Nokia is infringing any of the patents in this case?

A. I have no personal knowledge that leads me to believe that, no, sir.

Q. And prior to learning about this lawsuit, had you ever heard of Smart Path Communications?

A. No, I have not.

Q. And are you aware of anybody from Smart Path contacting Nokia and offering them a license to the patents that have been asserted in this case?

A. My understanding is that we were not contacted by Smart Path prior to the lawsuit being filed.

Q. Okay. What about Orckit IP? And I'm drawing a distinction there between Orckit-Corrigent. We saw a letter we'll talk about it, but Orckit IP. Had you ever heard about Orckit IP before this lawsuit was filed?

A. No, sir, I had never heard of Orckit IP.
Q. And did Orckit IP ever contact Nokia and offer them a license?
A. I understand that there was a letter sent from Orckit IP to Nokia, but I don't believe that it -- I don't believe it offered a license in the letter specifically for these patents.
Q. Okay. Let's take a look at that letter.
MR. HAYNES: If we could bring up PX 5.
THE WITNESS: Okay. I have it.
Q. (BY MR. HAYNES) And you were shown this letter by Mr. Bennett earlier. Correct?
A. Yes.
Q. And there was some discussion about this letter, and I want to direct your attention to the second paragraph there where it says, Orckit IP's patent portfolio includes U.S. Patent No. 7,773,508. The '508 Patent. Do you see that?
A. I do.
Q. Is that patent asserted in this case?
A. That patent is not asserted in this case.
Q. Now, there's also a long list of products that are listed here that are described as Alcatel Lucent switches and routers. Do you see those?
A. I do.
Q. It's a series of OmniSwitch products?

A. Yes.
Q. Do you know who the these products are?
A. Yes. Those are ethernet switch products that are sold by or owned by another company, Alcatel Lucent Enterprise.
Q. Are these OmniSwitch products products that Nokia was making or selling at the time of this letter?
A. At the time of this letter, no. Well, at the time of this letter, we may have been engaged in reselling. There are often situations where we will resell a product to fit a customer solution. So that may have been happening, but they were -- they would have been resold; they would not have been Nokia products.
Q. Okay. So were these Nokia products at the time of this letter?
A. No, sir.
Q. And are you aware of whether or not Nokia investigated the '508 Patent or these products when this letter came in?
MR. BENNETT: Objection; relevance, foundation.
THE COURT: Overruled.
THE WITNESS: It's my understanding that the letter was received by legal and it was investigated. To what extent, I don't know.
Q. (BY MR. HAYNES) Now, are you aware of what Nokia concluded with respect to whether or not this letter required some action?

A. My understanding is that Nokia concluded that no action was required.

Q. And what's your understanding as to why they reached that conclusion?

A. First of all, there was no assertion of infringement --

MR. BENNETT: Objection; foundation, hearsay.

THE COURT: He's here as Nokia's corporate representative. He's being asked what Nokia's view of this letter was. He can testify as to that. He doesn't have to have received the letter himself and read it himself. He's here speaking for the corporation.

Overruled.

Q. (BY MR. HAYNES) Would you like me to repeat the question, sir?

A. No, I think I got it. The -- in reading the text of this letter, Corrigent -- Orckit IP does not say that Nokia is infringing on a patent. It's an offer -- it says you shoulDConsider licensing this, and then it goes on to list these products which are not ours. So I think a reasonable person woulDConclude that there was really nothing to do.

THE COURT: Well, you're certainly here to speak for the corporation. But to offer opinions about what a reasonable person would have concluded, that goes beyond the question asked, Mr. Valley.

You need to limit your answers to the question that's

asked and to state the positions of the company here you're here to represent. But offering your own ideas about what a reasonable person might conclude or not, that's beyond the scope of what you're here for. You understand that?

THE WITNESS: Yes, sir. I apologize, Your Honor.

THE COURT: All right. Let's continue.

MR. HAYNES: Okay. We can bring that down.

Q. (BY MR. HAYNES) I'd like to talk a little bit now about Nokia and who that company is. Is that all right with you?

A. Yes, sir.

Q. Where is Nokia located?

A. Nokia is an international corporation, so we have operations in -- I think it's hundreds of countries.

Q. Okay. Do you have any offices in Texas?

A. Our U.S. headquarters is located in Dallas, Texas, in the Cypress Waters development.

Q. Okay. About how many people does Nokia employ in Texas?

A. So I don't have corporate-wide HR data available to me. I did check a listing of employees in that office, and it was over -- the list that I saw was over 1700.

We also have a large number of employees that are now working from home virtually, so they're not assigned to an office.

So, in total, I'm comfortable saying there are thousands of Nokia employees in Texas.

Q. And for about how long has Nokia been in business?
A. Nokia's been in business for a long time, since the 1800s.
Q. And has the business that Nokia has been in changed over time?
A. It has. They've been in -- Nokia has been involved in many different types of business.
Q. And what was the focus of Nokia's business in the 1990s and 2000s?
A. So in the 1990s and early 2000s, Nokia the name and the brand really rose to prominence because we were a large manufacturer of cellular phones. In fact, we still hear about it in almost every meeting.
Q. Does Nokia still make cell phones?
A. Nokia no longer manufactures cell phones.
Q. And what kind of products does Nokia make today?
A. Nokia is in the business of making telecommunications, data networks products and softwares that supports that industry and -- and adjacent industries.
Q. Give me some examples of the types of products you're talking about.
A. IP routers, IP switches, mobile telephone network devices that support the mobile network infrastructure. There are software applications that support those -- those products. You know, in our organization, for example, we have products

that prevent distributed denial of service attacks on internet devices. Network security.

So it's all in the idea -- or in the realm of telecommunications and -- and networking.

Q. Okay. Does Nokia engage in any research and development activities?

A. Nokia invests very heavily in research and development.

Q. And has Nokia ever won any awards for its innovations?

A. Awards, yeah. Nokia, through the Bell Labs organization within Nokia, has won -- at last count, I believe it was 10 Nobel prizes.

Q. And you were here for the opening?

A. I was here for the opening yesterday, yes, sir.

Q. Did you see Mr. Dacus put up that slide and it had a bunch of pictures of different devices on it. I think we saw a picture of the telephone and -- and a transistor. Do you recall that?

A. I do, yes.

Q. Are those examples of things that Nokia has invented?

A. Those were examples of things that Nokia has invented or Nokia has contributed to the invention of, yes.

Q. Okay. Does Nokia itself obtain patents for its innovations?

A. We do file patents, yes.

Q. About how many patents does Nokia currently have in its

portfolio?
A. The last report that I read from that organization listed it at over 20,000 patent families.
Q. And does Nokia as a company respect the U.S. patent system?
A. Absolutely.
Q. And why is that?
A. Our belief is that the U.S. patent system is critical to enabling innovation to occur.
Q. Now, as part of your role in Nokia, do you engage in licensing of Nokia's patent portfolio?
A. No, I do not.
Q. Does Nokia have a patent portfolio licensing program?
A. Nokia has an organization that is responsible for patent licensing, yes.
Q. And are you aware of whether or not Nokia has licensed its own portfolio to other companies in the industry?
A. We have. We actively do.
Q. What about the other way around? Does Nokia ever take licenses in order to use other people's technology?
A. Yes. If there's a technology that we would like to use in our product or were considering using in our product, we will absolutely license another inventor's technology.
Q. Now, does Nokia often take licenses for technology that it doesn't use in its products?

A. No. I'm sure it happens from time to time that we're considering something, so, therefore, a license is requested, but sometimes those plans wouldn't come to fruition. But in general, we would not take a license for something that we didn't intend to use.

Q. Do you think it would be fair for Nokia to be forced to pay for technology that it's not using?

A. No, sir, I don't believe it would be fair for anybody to pay for technology that they're not using.

Q. Okay. Now I want to talk a little bit about the technology itself. So I'm going to use some acronyms. If you would, help me go slow and we'll try our best to get through some of these acronyms. Is that all right with you?

A. Sure, of course.

Q. Your title says -- has IP networks in it. What does that refer to?

A. IP networks are the -- an IP network is today the foundation of most communication, most protocols, or most devices that we use utilize IP. So as a result, if you're a large service provider or a large enterprise, you'll have devices that are speaking in that language IP, which is, incidentally, the protocol that is predominantly used on the internet.

Q. Now, I think you said when you worked at Cabletron, you sold devices called hubs. Do you recall that?

A. Yes, sir.
Q. What's a hub?
A. A hub in -- in that context is -- is a device, an ethernet device, that -- it functions as a multiport repeater, meaning that when it receives a packet, a piece of data, it checks to make sure it's valid and then it forwards it to all other ports that exist on that device. It -- receive and then repeat out every port.
Q. Okay. Does Nokia make and sell hubs?
A. No, we do not.
Q. Why not?
A. In probably around the 1990s, the technology behind hubs went out of favor and in favor of switches which, unlike a multiport repeater, is a multiport bridge where 802.1(d) bridging is occurring on every port. It's a more -- a switch is more advanced. So there's no customer demand any longer for hubs.

THE COURT: Mr. Valley, try to slow down as you give these answers. Again, it's important for the jury to be able to follow your testimony. Okay?

THE WITNESS: Yes, Your Honor. Thank you.

THE COURT: Thank you.

Go ahead, counsel.

Q. (BY MR. HAYNES) Okay. I want to focus now on the Nokia routers and switches that are part of its product portfolio.

Okay?

A. Okay.

Q. Now, with respect to those products, do Nokia's customers choose which options anDConfigurations that they want to deploy in their networks?

A. They do.

Q. And do all of Nokia's customers use all the same configurations for those products?

A. No, they do not. They're very different.

Q. Is it even possible for a customer to use all of the features of a particular router in their networks?

A. No, sir, it is not.

Q. And why is that?

A. Many of the options are competing options, so to speak. If you were to -- you would pick a routing protocol in a particular scenario. So you wouldn't enable multibillion routing protocols, you would pick a tunneling technology. So you wouldn't pick multiple tunneling technologies at the same time. So it just -- it doesn't make sense. It would be chaotic to turn all of the features on.

Q. So is it fair to say there are alternative configurations and your customers can choose one or the other?

A. That's correct.

MR. BENNETT: Objection; leading.

THE COURT: Sustained.

MR. HAYNES: I'll move on.

Can we get Exhibit 19a?

Q. (BY MR. HAYNES) Mr. Valley, are you familiar with the document that's Exhibit 19a or JX 19a?

A. Yes, I am.

Q. And what is this?

A. This is a marketing document that is produced by IP networks marketing. It's an IP routing portfolio poster that shows the -- the products in that portfolio.

Q. Are any of these products hubs?

A. No, sir.

Q. Now, do all of these products have the same hardware and software on them?

A. No. There are -- there are different hardware variants anDConfigurations and there are different pieces of software which would be loaded and different software options.

Q. Okay. When you're talking to your customers, what differentiates one of these products, you know, the ones on the right versus the big ones on the upper left?

A. So the differentiating features are functionality in terms of what use cases or applications a product can be used for; the scale, so how many services could be enabled, for example, how many routes could be learned by the route table, as well as the overall capacity. Some are much larger than others on the page, so -- and this is often a customer

discussion like how big does it need to be.
Q. Okay. Let's focus on the upper left. There's products labeled 7950 extensible routing system. What's the use case for this line of products?
A. So the 7950 XRS is a core routing product. It was introduced to be an IP core product. So this is sitting somewhere in the center of the network where there's a very large volume of traffic being forwarded.
Q. Okay. Let's go over to the next one. There's a label for 7750. What's the use case for the 7750 service routers?
A. So the 7750 service router is really the -- what I woulDConsider the bread and butter of the portfolio. This -- these products use the network silicon that we designed that is Nokia specific network silicon.
So it has very advanced features, very advanced quality of service, and it has a very long list of features, like subscriber management, business services, the ability to do VPNs in support of business services. So this is a very important product in the portfolio.
Q. You mentioned Nokia silicon. What is that?
A. So for any of these types of products, there is -- there is silicon, there's a hardware, a computer chip, that is -- that is actually responsible for forwarding the traffic. And remember we're talking about extremely high volumes of traffic forwarding. So that silicon has to work at very high speeds.

It's specialized.

So as a result, we design our own silicon in order to perform that function for these products.

Q. Okay. Let's move on to the next one, the Nokia 7250 interconnect router. What's the use case for that?

A. So the 7250 IXR is -- first of all, it uses different silicon. It uses merchant silicon, which is silicon that is available from another vendor. And the application, therefore, is that it has less advanced services, so we typically use it for aggregation of traffic where there is a large volume of traffic coming from the access network and traffic needs to be aggregated toward a 7750 as an example. That's a use case.

There's also a use case for this product in mobile back call. That's the transportation of data from a cellular tower that you may see here on the side of the road back to a central location so that that traffic can be shuttled to and from the internet. So that's an application for this type of product as well.

Q. Is the 7250 interconnect router representative of the features and functionalities of the other products in this portfolio?

A. No, I would not agree. I don't think that's true.

Q. And why is that?

A. Again, the 7250 uses merchant silicon so, as a result,

there are other vendors in the routing space that would use the same silicon. So, therefore, the differentiation is more limited. You know, we can't go to a customer and -- and claim features of the hardware that are unique to us. So that is one of the reasons why it's not representative.

And the -- the software support on this product has different combination of features, so it would be really hard to say that it's representative of the rest of the portfolio.

Q. Now, in your role at Nokia, do you personally interact with your customers regarding the various products we just talked about?

A. I do engage with customers directly, yes.

Q. And what has been your experience in talking to customers regarding whether or not they like Nokia's products?

A. Overall, the -- the experience that customers have with the products in this portfolio are very strong. We are well-known for our product quality, just like we were well-known for our product quality in cell phones, so we consistently hear that from customers.

Q. Now, once Nokia sells a router or switch to its customers, who is responsible for determining the configuration of those products in the customer network?

A. Ultimately the customer is responsible for determining how they want the product to be configured.

Q. Is it possible for Nokia's customers to just turn off

certain features in these routers and never use them?
A. It's actually kind of the opposite. The product comes without a configuration, so it would do almost nothing. You have to log in and put a configuration in so that it begins doing what you want, what the customer wants.
Q. So you say you have to log in and put in a configuration. How does that work?
A. Yeah. So initially somebody woulDConnect to the device and give it an IP address, give it very basic information so that you can connect to it either directly from a workstation, you know, directly from one IP address to another, and log into the device in the same way that you would log into your router if you wanted to change a configuration at home.

There are also network management systems that are very popular. But in order for those network management systems to be able to talk to the router and give it a configuration, it has to be able to access it, so it needs to get an IP address somehow.
Q. So does Nokia know exactly how all of its customers have configured their specific networks when they deploy them?
A. All of its customers? No.
Q. Do you have any insight into how customers configure their network?
A. There are various ways that we get insight when we need it.

Q. Okay. Can you explain some of those ways?
A. Yeah, sure. Through the technical support process, it's very common for a customer to call and report a problem, and as part of analyzing that problem or trying to gather information, we will ask a customer to send us files from that product that include the state of the router.

I think we looked at some of those files earlier that include the state of the router. The configuration of the router would be included in those files. And that information has -- you know, has information that we could then use for that purpose.

There are -- you know, as I mentioned, I have a team that is responsible for the doing business development functions and advanced presales consulting engineering functions with customers. And so they also routinely have conversations with customers.

We have relationships with our customers that are more than transactional. So there may -- there are conversations that occur, there is information that gets exchanged when they're bouncing ideas off of each other, for example. So that's a way that we're able to collect some information.
Q. Are you aware of the feature in Nokia's products referred to as P2MP LSP?
A. Yes, I am.
Q. And what does P2MP LSP stand for?

A. P2MP is point-to-multipoint. LSP is label switch path. So point-to-multipoint label switch path.

Q. And are you aware that that feature is -- has been accused as part of Smart Path's allegations of infringement in this case?

A. I am aware, yes.

Q. Now, we heard a little bit about standardizations when Mr. Bennett was questioning you. Is Nokia's implementation of this P2MP LSP feature something that is standardized?

A. It is -- it is a standardized feature, set of features, yes, sir.

Q. Okay. And what standards body creates those standards?

A. Those standards come from the IETF, the Internet Engineering Task Force.

Q. And for the Nokia routers that have the capability to use that P2MP feature, do they implement it in accordance with those standards?

MR. BENNETT: Objection; leading.

THE COURT: Sustained.

Q. (BY MR. HAYNES) Do Nokia's products comply with the RFC 4875 IETF standard?

MR. BENNETT: Objection; foundation.

THE COURT: Overruled.

THE WITNESS: There are certain products in the portfolio -- the portfolio is made up of different product

families and then different product variants within those families. There are some products in the portfolio but not all that support RFC 4875.

Q. (BY MR. HAYNES) Okay. What is RFC 4875?

A. RFC 4875 is an IETF document that discusses the utilization of RSVP-TE, the reservation protocol traffic engineering, for point-to-multipoint LSPs.

Q. Okay.

MR. HAYNES: Let's pull up JX 27c.

Q. (BY MR. HAYNES) Are you familiar with this document?

A. I am.

Q. And what do you understand this document to be?

A. This is an MPLS guide for the 7X50 series routers.

Q. Does this document relate to how Nokia implements point-to-multipoint or P2MP LSPs?

A. Yes, it does.

Q. And so is this -- if a customer wanted to look at information about how Nokia implements point-to-multipoint LSPs in the products that support it, could they look at this document?

A. This is the first document that I suspect they would look at. That's what I would do.

Q. Okay.

MR. HAYNES: Let's turn to page 330 of this document.

Q. (BY MR. HAYNES) Do you see here there's a heading that says 4.32, Resource Reservation Protocol-Traffic Engineering, RSVP-TE?
A. Yes, I see it.
Q. And at a high level, what is that referring to?
A. So this is a listing of the standards that are supported by the 7X50 series products--that's the document family that we are looking at or that's the router family that we're looking at--specific to RSVP-TE.
Q. Okay. I want to direct your attention about five lines down, there's an entry for RFC 3209. Do you see that?
A. I do.
Q. And what is RFC 3209?
A. RFC 3209 is a standard that discusses how the protocol RSVP-TE can be applied to label switch path tunnels.
Q. Okay. And do Nokia's 7X50 routers implement the RFC 3209 standard?
A. The products that are listed for this guide, the 7750, 7450, they support this standard, yes.
Q. Okay. And then if we go further down the list and maybe start from the bottom, come up three, there is an entry for RFC 4875?
A. I see it, yes.
Q. And does that entry indicate whether or not the specific products in this manual implement RFC -- or implement

point-to-multipoint tunnels in accordance with the RFC 4875 standard?

A. It indicates that they do.

Q. Okay. You mentioned this concept before of an LSP or a label switch path. What is that?

A. A label switch path is a type of tunnel. It's a uni-directional tunnel that gets created in the network in order to forward traffic efficiently to its destination.

Q. So when we talk about point-to-multipoint tunnels, or LSPs, what does that refer to?

A. So this is an LSP. But instead of being point-to-multi -- point-to-point, which is the common -- it was the initial application for LSPs, it's point-to-multipoint. So there would be an entry point, let's say, but then multiple exit points of that LSP.

Q. Okay. What would you use something like point-to-multipoint LSPs for?

A. The common application that was considered for point-to-multipoint LSPs was for the delivery of multicast video. And you may understand that to be the distribution of live TV channels, so that -- over an IP network like over a residential network going to a subscriber's home. So that would be a use -- that would be an applicable use case for the idea of P2MP.

Q. Is the point-to-multipoint LSP feature the only way that

you can distribute multicast video?

A. No, it's not.

MR. HAYNES: Let's turn to JX 10d.

Q. (BY MR. HAYNES) Are you familiar with this document?

A. I am.

Q. And what do you understand it to be?

A. This document is the ACG, or the advanceDConfiguration guide. This is, again, in the -- in our documentation distribution. ACG is a little different than a manual in that it provides more detailed instructions on configuring products around a specific use case.

Q. Okay. I want to direct your attention to page 1,694 of this guide.

A. Yes.

Q. There is an illustration there figure 365 labeled P2MP example topology. What is shown there?

A. So this is a network -- this is a network topology. This is representative of what a network doing P2MP would look like.

Q. Okay. Now, you mentioned before that P2MP is point-to-multipoint. Right?

A. Correct.

Q. What's the point in this figure?

A. So in this diagram, the point is beginning with PE 1 on the top of this diagram that is adjacent to the multicast

source.
Q. Okay. And then that's going to multipoint. What are the multipoints in this illustration?
A. So the multipoints in this illustration are the multicast -- or the PE-6 and PE-7, which are adjacent to multicast client 1 and multicast client 2.
Q. Now, how many point-to-multipoint LSPs are shown in this illustration?
A. One.
Q. And how many tunnels are shown in this illustration?
A. One tunnel.
Q. Now, I see that when it branches, there's two different paths.
A. Uh-huh.
Q. Are those paths tunnels?
A. No. The paths are paths, and the tunnel is the LSP itself, the point-to-multipoint LSP itself.
Q. Now, you mentioned before that not all of Nokia's routers support point-to-multipoint LSPs. Do you recall that?
A. I do.
Q. Which of Nokia's router products do not support point-to-multipoint LSPs?
A. So point-to-multipoint LSPs specifically with -- based on RFC 4875 using RSVP would not be supported on the 7705 nor the 7250. Yeah.

Q. Okay. So these point-to-multipoint tunnels that we are looking at from that RFC 4875 standard, I can't use those on Nokia's 7705 or 7250s. Is that right?
A. Can't use it on the 7250s, neither the 7210s --
Q. Okay.
A. -- in addition.
Q. Just so I got the complete list, the products that don't support point-to-multipoint LSPs under RFC 4875, is that the 7250, the 7210, and the 7705?
A. That's correct.
Q. Okay.
MR. HAYNES: Can you bring up JX 29?
Q. (BY MR. HAYNES) What do you recognize JX 29 to be?
A. This is an MPLS guide as well. This is for the 7705 service aggregation router, or the 7705 SAR.
Q. Okay. Let me direct you to page 589 of this document.
A. Okay.
Q. There's a heading there, RSVP-TE and FRR. Does this tell me -- this section tell me anything about what RFC standards are implemented by the 7705 product?
A. It does.
Q. And does this indicate one way or the other whether the 7705 product supports those point-to-multipoint LSPs that we were talking about for RFC 4875?
A. So this tells us that RFC 4875 which would support

point-to-multipoint tunnels using RSVP-TE are not supported on the 7705.

Q. With respect to Nokia's customers today, is point-to-multipoint LSP, using RSVP, is that something that is a popular feature today?

A. Today? No, sir.

Q. And why is that?

A. It's -- this was a -- this was a protocol that, you know, had a moment in time in terms of popularity, and it's -- it's just not there today. The distribution of multicast traffic in this way, distributing live TV simultaneously to multiple subscribers from a service provider, has effectively -- with streaming, it's kind of fallen out of favor.

Q. So if I'm streaming Netflix, would I ever use a point-to-multipoint LSP?

MR. BENNETT: Objection; calls for speculation.

THE COURT: Sustained.

Q. (BY MR. HAYNES) You mentioned streaming services.

A. Yes.

Q. Is Netflix an example of a streaming services you're talking about?

MR. BENNETT: Objection, leading.

MR. HAYNES: I can rephrase, Your Honor.

THE COURT: Please do.

Q. (BY MR. HAYNES) Can you give me some examples of

streaming services that you were referring to?
A. Yes. Streaming services would be -- examples would be Netflix, Hulu, Disney. I'm sure there are others that I'm forgetting at the moment, but there -- Amazon Prime. So services that deliver video over the internet instead of from a service -- directly from a service provider.
Q. And are those services multicast services of the type you described earlier?
A. No, they're unicast. So when you receive traffic that way, you're -- the cloud provider that's providing the streaming service sends a copy of the video for -- to every subscriber. It's not replicated in the network which is how multicast works.
Q. Okay. As part of your role as the corporate representative in this case, did you conduct an investigation to try to figure out how many of Nokia's customers to Nokia's knowledge are actually using point-to-multipoint LSPs under 4875?
A. Yes, I do.
Q. And what did you conclude based on your investigation?
A. The conclusion is that we do not have customers in North America that are using point-to-multipoint LSPs.
Q. And what did you do to reach that conclusion?
A. Two things. I consulted with members of my team that are also working with customers but that spend more time in the

details with customers than I do to get their feedback.

I was also given access to a technical support database, the 4LS database. And from that database, I ran a search command to look through the configuration file portion of those technical support documents to verify that P2MP was not configured to -- based on what I could see.

Q. Okay. So as far as you are aware -- or are you aware of any of Nokia's customers in the United States that are currently using this point-to-multipoint LSP feature that we've been talking about?

A. I am not aware of any customer that is actively using it in the United States.

Q. Okay. Let's switch gears a little bit. Are you aware that one of the patents that is asserted in this case involves something called a TDM interface?

A. Yes, I am.

Q. Are you familiar with the concept of a TDM interface as it pertains to Nokia's products?

A. Yes, I am.

Q. And what do you understand a TDM interface to be?

A. So TDM is -- is a type of circuit that predates ethernet before ethernet was widely used in metro areas. People would obtain an internet connection using like a T1 or a T3 and, running a specific protocol like PPP as an example, a data service could be provided over a TDM circuit.

Q. Okay. Do all of Nokia's routers and switches have a TDM interface on them?
A. No, they do not.
Q. Which Nokia products do not have a TDM interface?
A. So TDM interfaces -- I'm just trying to picture through the portfolio in my head. TDM interfaces would not be on the 7950s. They would not be on most of the variants of the 7250. I think there may be one exception to that. They would also not be on most of the variants of the 7210s.
Q. Why is there no TDM interface on the 7950 product?
A. The 7950 is ethernet only.
Q. Why don't you need a TDM interface if you're ethernet only?
A. So there is -- in modern, you know, network design, the conversation is almost always around ethernet. Ethernet is an efficient way to transport this type of communication and data. It's very high volume. So there's really no customer demand for TDM interfaces at that volume and at that speed.
Q. Okay.
MR. HAYNES: If we could, let's look at JX 21.
Q. (BY MR. HAYNES) Are you familiar with this document?
A. Yes, I am.
Q. What do you understand it to be?
A. This is software release notes specifically for release 19-7R1. Software release notes is a document that we release

that accompanies a new software release, and it enables customers to understand what's in the software, if there are any caveats. It's really a -- if you are going to use this software release, this is the information that you need to know type of document.

Q. Okay. I want to direct your attention to page 81. Do you see a heading there that says Unsupported Features?

A. Yes, I see it.

Q. Then below that, there's a sub-heading 6.1 that says hardware. Do you see that?

A. I see that as well, yes.

Q. And there is a table below it, table 10, that says unsupported hardware features. Do you see that?

A. I do.

Q. Okay. What does that table illustrate?

A. So this table illustrates which hardware features are not supported on these various variants of the product portfolio. So the products are on the top, the interface types are on the left, and the box shows which are -- the X shows which are not supported.

Q. Okay. Does this chart tell me anything regarding which of Nokia's products support or do not support TDM interfaces?

A. It does.

Q. Okay. Where would I find that information in this chart?

A. So on the line that says channelized and TDM interfaces,

we can see here that those are not supported on the 7950; on the 7750 SR-A4 and A8; on the 7750 SR-1e, 2e, 3e; on the 7750 SR-1, nor are any of -- nor on any of the more modern products, the most recently released products, which are the SR-1, S2, S7s, and 14s.

Q. Are you familiar with something called a serial interface?

A. Yes, I'm familiar with serial interfaces.

Q. What's a serial interface in the context of --

A. A serial interface is a low-speed interface that can be used for data as well.

Q. Okay. Do Nokia's routers and switches support the use of serial interface -- interfaces to transport traffic over the network?

A. I believe in the 7705 family, there is a -- there is a line card that supports serial interfaces, yes.

Q. Okay. What about Nokia's products other than the 7705 with that long line card? Do any of those other products support serial interfaces for use of transporting traffic over the network?

A. For the use of transporting data over the network, I don't believe any other products have a serial interface for that purpose.

Q. Now, in the opening you heard Mr. Dacus talk about layers and some discussion of layer 2 and layer 3. Do you recall

that?
A. I do.
Q. Do you have an understanding based on your experience in the computer networking business what the layer 2 and layer 3 refer to?
A. I do, yes.
Q. And what do you understand those references to be to?
A. So there's a model that is used in the -- in using end data networking called the OSI model. And the model is -- it's really just designed to make it easier for a network engineer to visualize where communication -- specific types of communication are happening in the protocol stack.
And, you know, another significant advantage of it is that it makes it easier to troubleshoot. If something is misbehaving, you can pretty quickly identify which layer is misbehaving and then that tells you which device to look at.
Q. So in Nokia's products, does it use the OSI model to conceptualize the connections between different products at different layers?
A. We and everybody else in this industry does, yes.
MR. BENNETT: Objection, Your Honor; non-responsive. Move to strike.
THE COURT: Overruled.
Q. (BY MR. HAYNES) Can you give me an example of a protocol that would be considered a layer 2 protocol under the OSI

model?
A. Sure. Ethernet is a layer 2 protocol. Frame relay, ATM, those are examples of layer 2 protocols.
Q. Okay. Are you familiar a Nokia term called triple play services delivery architecture?
A. I am familiar with it, yes.
Q. And you understand that that architecture is something that Smart Path has accused of infringement in this case?
A. I understand that, yes.
Q. At a high level, what is that triple play services delivery architecture used for?
A. Triple play services delivery architecture is an architecture--you could think of it as a blueprint--so that a service provider could offer a combination of three services. Those services are almost certainly voice, video, and data to residential subscribers over an IP service.
Q. Is the -- does the triple in triple play refer to voice, video, and data?
A. It does.
MR. BENNETT: Objection; leading.
THE COURT: Sustained.
Q. (BY MR. HAYNES) What does triple refer to, sir?
A. Triple play in this context is the delivery of voice, video, and data to residential subscribers.
Q. Now, these days if you talk about Nokia's customers that

are using Nokia routers, do you have any understanding as to about how many of those routers would actually be useful or being used by any customer in a triple play services delivery architecture?

A. If I understand correctly regarding the products that are being sold, the install base, I would say -- to the install base, I would say it's less than 20 percent.

Q. And you consider triple play to be a popular feature with your customers these days?

A. These days it is not particularly popular, no.

Q. And why is that?

A. Again, the network, the technology changes a lot over time. When you think about voice, video, and data being delivered to a residential home, what tends to be popular these days is the delivery of a high-speed data circuit for internet access. But the delivery of voice has also fallen out of favor because, you know, people are using mobile phones, cell phones, and many of them have, therefore, abandoned using a dedicated phone line in their home because they have a mobile phone. So that is not a super popular service anymore.

The same concept is true for video delivery. There are still people that subscribe to those types of services, but many people are doing this cutting-the-cord thing and they're choosing to stream their video delivery over the internet

instead of purchasing that as a service from their service provider.

So it's not something that we are regularly and very popularly engaging with customers about like we would have years and years ago when this architecture was drafted.

MR. HAYNES: If we could turn now to JX 46a.

Q. (BY MR. HAYNES) Are you familiar with this document?

A. I am.

Q. And what do you understand this document to be?

A. This is, again, in the document library that is released with the software releases. This is the triple play service delivery architecture guide, which is specific to the 7450, 7750, and virtualized service router.

Q. Okay.

MR. HAYNES: If we could, let's turn to page 41 of this document.

Q. (BY MR. HAYNES) Do you see there's a figure there labeled Nokia's Triple Play Service Delivery Architecture? Do you see that?

A. Yes, I see it.

Q. What is illustrated in this figure?

A. This is a characterization of the architecture, the network that would be -- that a customer could build in order to deliver that type of triple play service to the end customers.

Q. And do you see there are a couple of different boxes in the center labeled BSA? What are BSAs?
A. I do. BSA is a broadband service aggregator.
Q. Okay. And what does a BSA do?
A. So the BSA is responsible for carrying traffic from the access devices--and it looks like those may be DSL devices in this diagram--from subscriber homes. That traffic gets aggregated by the BSA toward the rest of the network.
Q. What types of product are these boxes labeled BSA?
A. These are routers. These are 7450 ESSs.
MR. HAYNES: Take that down. Actually bring the figure back up, please.
Q. (BY MR. HAYNES) I forgot to ask you, in the lower right there, there's a label BSR. Do you see that?
A. I do.
Q. And what's a BSR?
A. BSR is the broadband service router in this architecture.
Q. Okay. What does the BSR do in this architecture?
A. So the BSR is the layer 3 gateway for those subscribers that are off to -- to the far left.
Q. Okay.
MR. HAYNES: If you will bring down the highlighting, please.
Q. (BY MR. HAYNES) Okay. In this figure there's a big red circle and some -- a label there that says secure VPLS

infrastructure. What is that?

A. So those -- the BSAs and the BSRs in this context would be using a service called VPLS, which is a layer 2 point-to-multipoint service. And the -- and that's -- that is the way that data from a subscriber on the left side is received by the BSA and then forwarded to -- directly to the BSR so that the BSR can act as the layer 3 gateway for those homes.

So it's the -- it's the -- the red lettering and the circle show us where the VPL -- the boundary, I'll say, of the VPLS infrastructure.

Q. Does that red circle indicate connections between the BSAs and the BSR?

A. No, that's not my -- that's not my reading of this -- of this diagram.

Q. So why is it that the circle and that label are in red and everything else in this picture is in black and white?

A. So VPLS is an important feature. It -- it provides a certain extent of security, which is what is labeled here, to prevent traffic from moving from one layer 2 instance to another layer 2 instance, for example. So that's important.

And I think it's highlighted this way just to talk to -- to customers about the -- the innovation that's there and so that they can see the -- the boundary.

Q. Now, if the red circle isn't the connections, is there

something else in this figure that shows the actual connections between the BSAs and the BSRs?

A. Yes. The dotted lines show the connections between the BSAs and the BSR.

Q. Okay. Is that what we've highlighted here --

A. That's what's now -- what's now highlighted in blue, yes.

THE COURT: Let me make sure both of you-all understand. You need to talk one at a time. Make sure he finishes the question before you answer it, Mr. Valley, and he'll make sure that you've finished your answer before he asks the next question. But it's important for clarity in the record that you speak one at a time. All right?

MR. HAYNES: Thank you, Your Honor.

THE WITNESS: Thank you, Your Honor.

THE COURT: All right. Let's go forward on that basis.

Q. (BY MR. HAYNES) Okay, Mr. Valley. So what we see in -- can you just explain again the dashed lines that we see here, what are those? I didn't actually mark the dashes, but the things near where I drew those marks.

A. The dashes are illustrating the connections of the VPLS service which are directly from the BSAs to the BSRs.

Q. Now, these VPLS connections that are indicated by the dash lines, at what layer are those connections?

A. The VPLS is a layer 2 protocol.

Q. Okay. Now, does this illustration show a layer 2 ring network?

MR. BENNETT: Objection; leading.

THE COURT: Rephrase your question, counsel.

Q. (BY MR. HAYNES) Are there any ring networks shown anywhere in this figure?

A. There's nothing in this document that leads me to conclude that there is a ring in -- in this diagram.

Q. What about the red circle?

A. Again, my reading of the red circle is that it's -- it's -- the red circle means exactly what the text in red means. It says the red circle is showing the boundary of the secure VPLS infrastructure.

Q. And how would you characterize the type of network that is formed by those VPLS connections?

A. The VPLS connections are a point-to-point or point-to-multipoint service between the BSA and each of the BSRs.

Q. Okay. I want to direct you now to some text that shows up below this figure. I think it's actually the very bottom of the page, rolling over to the next page, starting with "The connectivity." Okay. Yeah, this is it.

So I'm reading from page 42, and there's a statement there where it says, "One of the advantages of using VPLS for this application is that VPLS instances can be automatically

established over both hub and spoke and ring topologies providing sub-50 ms resilience."

Do you see that?

A. I do, yes.

Q. What do you understand that to be describing?

A. So when you're deploying a VPLS service, you'll have devices that are participating in that service in order to provide the service to customers that are attached to it. This is saying that in order for 50-millisecond resilience to be maintained, which is important. Right? If there's some sort of failure, it's important for the end customer for the service to be able to recover very quickly.

So this is simply saying that you can use either topology type, a hub-and-spoke topology or a ring topology, in order to still achieve that 50-millisecond resilience.

Q. Okay. Let's go to the next sentence. Do you see there it says, "Regardless of the fiber plant layout, VPLS enables a full mesh to be created between BSA and BSR nodes, ensuring efficient traffic distribution and resilience to node or fiber failure."

Do you see that?

A. I do.

Q. What do you understand that to be describing?

A. So VPLS -- if we were to go through the standard, which I don't think we have time to do now, but VPLS requires that a

full mesh be created between the participants of that service. And what this is simply saying is it doesn't matter how the fiber is laid out, could be in a ring, could be point-to-point, could be some other topology. VPLS enables that mesh to be created over the topology type ensuring that traffic distribution -- ensuring that traffic gets to where it needs to be, but that also that that resilience that was mentioned in the previous sentence is also maintained.

Q. Okay. At what layer of the OSI model is this fiber layout?

A. A fiber layout is layer 1, or layer 0. It's -- it's the -- the physical fiber that is being used by one of the higher layer protocols.

Q. Okay. Is there a layer 2 network that is created between these BSAs and BSRs?

A. The VPLS service is layer 2, but there is -- but the communication path is happening, you know, between the BSA and BSR is point-to-point at a higher level.

Q. Okay. What does it mean when it says the VPLS enables a full mesh?

A. So this is a requirement in the VPLS standards. There have been evolutions to VPLS standards to make this requirement easier to achieve like in larger networks. But VPLS requires that the nodes that are participating for that particular service be in a full mesh so that they have

reachability in this case between the BSA and the two BSRs.
Q. In the Nokia triple play architecture, are those layer 2 VPLS connections in a layer 2 ring network?
A. No, they're not.
MR. HAYNES: Now, if we can go back to the figure again.
Q. (BY MR. HAYNES) Now, we were talking -- we've been talking about the VPLS connections that are these dotted lines. These BSAs that are over here on the left, do they have visibility to the network structure of the networks that are on the right side of the BSRs here?
A. No, they do not.
Q. And why is that?
A. So the VPLS in this -- you know, according to the guide if somebody were following the blueprint, the VPLS would begin at that one BSA where traffic is coming in to -- to the secure VPLS infrastructure, and it would terminate. That service would then terminate into the BSR, which is the boundary of the secure VPLS infrastructure.
So that's all that the BSA can do is forward that traffic inside the VPLS service directly to the BSR, and that's it. That's where the service ends. The BSR would have to then do something else with it based on what it knows.
Q. So is it possible for those BSAs to create a path that goes through the BSR out into the internet?

A. Not in this example, no, sir.
Q. Now, in the text we looked at earlier, there was a reference to hub-and-spoke topologies. Do you recall that?
A. Yes.
Q. And what's a hub-and-spoke topology?
A. So a hub-and-spoke topology is a network design consideration that says if I have multiple remote sites, let's say, and they're correcting back to one central site, the remote spikes would be spokes and they would all be connecting back to that central -- to that central site. And the central site we would call a hub in that scenario.
Q. Now, is that central site that you just referred to as a hub, is that a hub device of the type you were talking about that you sold at Cabletron?
A. No. No, sir.
Q. What's the difference?
A. A hub device, a device that's an ethernet hub, has a very specific functionality which is a repeater, you know, a device that is repeating ethernet traffic out. Whatever port it receives it on, it repeats it to all the other ports. This is not that kind of device. This is a router running an advanced VPLS service. So it's not the same type of -- it's simply not the same thing.

MR. HAYNES: Can we bring up PX 13?

Q. (BY MR. HAYNES) Are you familiar with this document?

A. I have reviewed this document, yes.

MR. HAYNES: And, Your Honor, I apologize. I'm almost done, but this last document is a customer document. So I need to ask to seal the courtroom.

THE COURT: All right. Based on counsel's request to protect confidential information, I'll order the courtroom sealed at this time. I'll direct that all persons not subject to the protective order in this case exit the courtroom until it's reopened and unsealed.

And, counsel, let me know when we've reached that point.

MR. HAYNES: Thank you, Your Honor.

(Courtroom sealed.)

(Courtroom unsealed.)

Q. (BY MR. HAYNES) Mr. Valley, we were talking about figure 1 that illustrated the triple play architecture. Do you recall that?

A. Yes, sir.

Q. What type of product in Nokia's portfolio are the BSRs?

A. The BSRs are typically 7750s, so they're routers.

Q. No further questions for you.

MR. HAYNES: I'll pass the witness, Your Honor.

THE WITNESS: Thank you.

THE COURT: All right. Is there redirect?

MR. BENNETT: There is.

THE COURT: Let's proceed with redirect by the Plaintiff.

Proceed when you're ready, Mr. Bennett.

MR. BENNETT: Thank you, Your Honor.

REDIRECT EXAMINATION

BY MR. BENNETT:

Q. We talked for a long time about a lot of devices and a

lot of manuals and a lot of paper, but I want to back up maybe a couple of steps and talk about just the boxes themselves, not the paper that goes with them. Okay?

A. Okay.

Q. All right. In all of these boxes -- well, the 7450, those kinds of accused products that we discussed, each of them contain what's called source code. Right? Or run source code.

A. No, I can't agree with that.

Q. Okay. Well, the services that these routers provide, part of them are based on software. Right?

A. That's correct.

Q. And part of that software is made up of source code. Right?

A. Source code is a component of software development, yes.

Q. Okay. And the source code largely determines what functions the software will perform. Right?

A. I cannot agree with that, either.

Q. What part of that do you disagree with?

A. So the source code is the programming that is available when then executed -- compiled and executed and loaded into the software is available to be configured. So the -- what the product will do is based on the configuration of the product, not the source code that may happen to be -- may happen to have been used to compile the software.

Q. Can you configure a router product like the accused products we've been discussing without source code?
A. You don't -- you don't use source code in order to configure a router.
Q. You may not use source code to configure a router. My question is more along the lines of the functions the router performs. The router -- the functions that -- the software and its functions are accomplished through source code. Right?
A. I cannot agree with the statement, no, sir.
Q. Okay. Well, let's try it this way. The source code within the software or that -- that dictates which functions the software will perform is made up of certain calls or functions. Right?
A. So source code, yeah, is -- is written in a programming language that -- that, yes, it would have functions, it would have calls, it would have -- it would have other attributes of software development which are not my expertise.
Q. And that's my next question. That's not your expertise, is it, sir?
A. Source code and software engineering, software programming, is not my expertise, no, sir.
Q. And you have not looked at any of Nokia's source code in this case, have you?
A. I -- no, I don't review source code as -- in this case or

as part of my job.
Q. And so if the source code that's used or that comes with or that Nokia's products avail itself of, however you want to phrase it, if that source code contains functions that infringe on the patents, you wouldn't know that.
A. The contents of the source code, I do not know. That is correct.
Q. Right. And so if that source code led to functions or the performance of certain functions that infringe on these patents, you wouldn't know that. Right?
A. I'll restate. I do not have visibility into the source code as part of my job.
MR. BENNETT: Your Honor, move to strike as non-responsive.
THE COURT: Sustained.
You need to answer the question if you know the answer. Either state it again or move on.
MR. BENNETT: I'll state it again one last time.
Q. (BY MR. BENNETT) Mr. Valley, if the source code within these products performed functions that infringed on my client's patents, you wouldn't know that. Right?
A. I would not know that. That's correct.
Q. Mr. Valley, do you agree or disagree with this statement: A router can be a hub? You talked a lot about hubs with Mr. Haynes. I'm just going to ask you that: agree or disagree, a

router may be a hub.

A. I disagree.

Q. Okay. You're a Nokia employee. We've established that. Right?

A. Yes, sir.

Q. And Nokia pays your salary?

A. Yes, sir.

Q. And you've worked for Nokia for how long?

A. Since the acquisition of Alcatel Lucent in 2016.

Q. And Nokia has not designated you as an expert in this case, have they?

A. They -- my understanding is they have not.

Q. But we will hear from experts in this case, won't we?

A. My understanding is that is correct, yes.

MR. BENNETT: I'll pass, Your Honor.

THE COURT: All right. Is there additional cross examination?

MR. HAYNES: Yes, Your Honor, very briefly.

THE COURT: All right. Proceed.

RECROSS EXAMINATION

BY MR. HAYNES:

Q. Mr. Valley, there were a whole lot of questions there about source code. Do you recall that?

A. I do.

Q. Are you familiar with the functionality of Nokia's

products as it's provided to its customers?
A. 100 percent.
Q. And if that functionality available on those products was doing something, you would be aware of that, wouldn't you?
MR. BENNETT: Objection; leading; calls for speculation.
THE COURT: I'll sustain as to leading. I don't see that it calls for speculation. He was asking what he would or wouldn't know personally.
Rephrase the question, Mr. Haynes.
Q. (BY MR. HAYNES) Mr. Valley, based on your personal knowledge, is Nokia in the practice of putting in features into its source code that are not actual features in the products?
A. No, no, sir. There may be situations where a feature existed at one time or a feature is in development but not yet ready to be released where that -- that type of scenario may exist, but to my knowledge, the development team spends their time on coding features that would then be used in customer applications. That's --
MR. BENNETT: Objection. Apologize. I object to the non-responsive portion of the answer after "But".
THE COURT: I'll consider whatever your objection was as not timely. All right. Next question.
Q. (BY MR. HAYNES) Mr. Valley, are you at a high level

aware of the features that have been accused of infringement in this case?

A. Yes, I am.

Q. And are those features that are implemented -- well, are those features implemented in accordance with any industry standards?

MR. BENNETT: Objection, Your Honor, calls for an expert conclusion.

THE COURT: Sustained.

Q. (BY MR. HAYNES) I'll finish with this, Mr. Valley. Are you aware of any reason personally or as Nokia's corporate representative to believe that Nokia has at any point infringed on any patent owned by Smart Path?

A. I am not aware.

MR. HAYNES: Thank you, Your Honor. Pass the witness.

THE COURT: All right. Further direct?

MR. BENNETT: No, Your Honor.

THE COURT: Then you may step down, Mr. Valley.

THE WITNESS: Thank you.

THE COURT: You're welcome.

Plaintiff, call your next witness.

MR. BENNETT: Your Honor, we have --

THE COURT: Do I understand we have some witnesses by deposition?

MR. BENNETT: That's correct, Your Honor.

THE COURT: All right. Identify your deposition witnesses.

MR. BENNETT: We will play the video deposition of Jeffrey Jakab.

THE COURT: And identify Mr. Jakab's position, if you will.

MR. BENNETT: He is a vice president within Nokia.

THE COURT: And do you have allocations of the time between the parties that you can tell me about?

MR. BENNETT: Yes. Mr. Jakab's deposition has a total run time of 14 minutes, 18 seconds with 11 minutes, 57 seconds allotted to Plaintiff and 2 minutes, 30 seconds allotted to Defendant.

THE COURT: All right. Proceed with this witness by deposition.

MR. BENNETT: Thank you, Your Honor.

JEFFREY JAKAB

BY VIDEO DEPOSITION

Q. You started in 1998 with Nokia designing software?

A. That's correct.

Q. And then after that eight-year stint as a product line manager, what was your next title?

A. Then I became director of the hardware PLM team, and then I took over ownership of -- of multiple products.

Q. Okay. Which products did you take over ownership for as a hardware PLM?
A. So with all of the products within the IP product portfolio of Nokia, so this included at the time 7950 XRS, 7750 SR, 7450 ESS, the 7705 SAR, 7210 SAS. Those were our products at the time.
Q. Okay. And what's your title now?
A. Now I am the VP of the Hardware Program Management Team.
Q. And then after being a product line manager, did you maintain -- so whenever that ended, I guess around 2015 until now, do you still have responsibilities and interactions with customers?
A. I do, yes.
Q. How has that changed or how is it different from what it was when you were a product line manager, if at all?
A. The scope of what I do now is much more -- is much broader. So previously where I would have been generally just talking about a single product, I now have that ownership across the product portfolio, so I'll do that same conversation across multiple products across multiple architectures.
Q. Just off the top of your head, can you think of any specific customers where that's been something that Nokia has done--let me be more specific--where Nokia has gone in anDConfigured a multiple router solution for a customer?

A. So that is a standard mode of operations for us. Customers will typically ask for help when it comes to configuring items. I think any -- any of our -- any of our major customers, I think that's a typical question that they would ask and we would support them on.

Q. What are the typical services that Nokia would provide when configuring a router?

A. So this would generally -- well, when we go into -- so let's say we start with just going into a lab environment where a customer would do, like, a proof of concept test or just an evaluation of our product. We would provide a standard set of configurations to help get them started around testing, if there was a particular set of features it is that they wanted to validate; that could also include a lab setup in either our facility or sending someone from Nokia to their facility to help them set up a platform, get it initially configured.

There's options to help with them to run through test cases, or, again, just validate performance around specific configurations. Those are fairly typical things. But it can extend to a number of customer-specific asks beyond that as well.

Q. When testing is provided at a Nokia facility for a U.S. customer, what -- what facility would Nokia use?

A. So depending on the customer, we have a new product

introduction lab that is in our office here -- well, previously in Mountain View, now it's in Sunnyvale. We also have a number of other lab locations within the continental U.S. that can be used. It really depends on the network scope of what it is they want to validate or what specifically they want to validate in combination with where we have the right pieces of equipment available at any given time.

Q. So if a customer wanted to set up a network with a 7750 service router and see how that might perform with other nodes in a network, you know, some kind of proof of concept involving a 7750 router, they could make arrangements with Nokia and the NPI team to see how that might work for them?

A. That is correct.

Q. Off the top of your head, in the last five years can you think of any customers who've used Nokia's NPI facilities to test a proof of concept on a, say, 7750 service router?

A. So just to give you a rough idea as to how many customers that would be, we typically do have sometimes one or two customers every week, different customers, that would do exactly that.

Q. When -- just focusing on that, the former part, the software, when Nokia makes changes to software and issues a release notice to the software, how does -- how are those updates or changes to the software disseminated or given to customers for implementation?

A. So the nature of how things are disseminated would primarily revolve first around the release notice. So the release notice is the primary vehicle we use to communicate updates to the field on a particular release. There may also be, again, customer conversations or emails or conversations that someone within the organization has with a customer, in addition to the release notice, to provide some context around updates or changes or things that are new.

Q. Under what circumstances would Nokia push the update to -- again, using one example, a router -- looking at a router and a router's OS, under what circumstances would Nokia push that kind of update to a router?

A. That is always the case. It is always a push.

Q. Nokia, in addition to the hardware that it sells, it also serves -- sells maintenance services to customers.

A. That is correct.

Q. In terms of the prices reflected in the -- in the GLP and the discounts offered, are there -- is there like a percentage limit that Nokia establishes? Like, you mentioned 5 percent. But would it give a 25 percent discount?

A. So 25 percent or beyond, I would say, is a fairly common discount in practice.

Q. Is there a percentage where -- at which Nokia says, No way, not approving that?

A. Anything below a 30 percent profit margin is generally

very difficult to approve. That is -- you know, at that level, we're not -- we're not effectively banking anything. So for the Americas, you know, generally we try to focus on having a margin, I would say, of 50 to 60 percent, higher if we can get it, but that's only a guideline. Right? It will really -- it really will vary deal by deal.

Q. Right. So at least a guideline is to shoot for 50 to 60 percent profit margin?

A. Yes.

Q. Would product data sheets be viewed as a means of marketing?

A. Yes.

Q. And you help create those, too. Right?

A. Yes.

Q. And in the next paragraph, it reads, "The" -- on page 2 of Exhibit 16: "The fact is, when the pandemic struck, we began to rely on IP networks to some degree or other for how we live, work, and play. Online applications and services such as remote learning, e-medicine, video conversation, online grocery shopping, and video streaming caused this deluge in network traffic, but they brought an additional challenge of new traffic and usage patterns. Service providers were forced to adapt since any tolerance for low or variable service quality all but disappeared."

Do you remember writing that passage?

A. I think that particular set of lines would have come from someone in the marketing team.
Q. Okay. But in any event, what's in that paragraph is true. Right?
A. Yes.
Q. And there was a greater need after the pandemic to make sure that internet service providers, like the AT&Ts and the Verizons of the world, that their networks ran more efficiently. Right?
A. I don't think that anything has changed, really, prior or post-pandemic. We still build to the same reliability standards before and after. I think, you know, the paragraph there really just is aiming to cover just a difference of focus, that's all, from before to after the pandemic.
Q. Well, we know that one thing changed--right?--and that's the amount of traffic on a network. That changed. Right?
A. Well, the growth rate, I think, again, has been fairly constant irrespective of the pandemic. What the pandemic really triggered was, again, a usage change in terms of, you know, how -- how networks were prioritized. Right? Because, you know, prior to the pandemic, there was a lot more focus on building business services-capable networks as opposed to during the pandemic all of the sudden residential services really took a big uptick in terms of importance because everyone that used to be in the office before now ended up

working from home.

So it triggered some fairly dramatic growth differences in residential networks compared to business. But, overall, growth remains, again, relatively constant over the long-term.

Q. Growth remains constant, but traffic, that has grown according to -- at least according to Exhibit 16. Right?

A. Correct.

Q. And you agree with that statement in Exhibit 16. Correct?

A. Yes.

Q. Given all your experience within Nokia of, you know, focusing on what features to market to consumers -- or customers--excuse me--in connection with the products we've been discussing, the ones listed in Exhibit 5, for example, how would reliability, stability, network resiliency, rank among the key features that customers expect?

A. So for a service provider, those are essential.

Q. All right. And then for customers that aren't necessarily service providers, how would they rank?

A. It's still the same.

Q. You mentioned a concept, I think, of interoperability. Right? That that function can be there and it's just a question of bringing it out in between the various products. Is interoperability something that Nokia places on a value on?

A. I would say so, yes. Interoperability is important for

us. I think we pride ourselves on being standards compliant. So as long as it's, you know, an IEEE or IETF standard that's published and we -- we're going into an environment where one of our competitors may already have that capability, and a customer is pushing us to do that in order to go and secure, you know, a portion of their network, then it is something that we would take a look at over time.

Q. If you were to rank, you know, interoperability and reliability, where do you think -- of those two, which would come out ahead--reliability or interoperability?

A. Reliability would be more important.

Q. And looking at this, and based on your experience, I mean, is there any way to sort of back out one of those six features depicted here and say, Well, this one has more value than that one, or anything like that?

A. Again, I think part of our value proposition is our ability to go and put all of these things together. I don't think any one of our customers would go and make an investment decision in Nokia just based on one of these things in isolation. It's really all things in combination that they'll use, again, to make an investment decision in us.

Q. This is, more or less, a list of benefits that the 7750 service router offers to Nokia customers. Right?

A. That is correct.

Q. I mean, there's lots of things that you can differentiate

a 7750 router. I mean, it could be, you know, you use a different kind of aluminum than your competition does. How did you know or why did you pay attention to these specific ones as opposed to something else that may just be irrelevant?

A. I think the ones that we highlight here, these are some of the key things that customers look for when, again, they look to make a big investment in a next-generation network.

Q. And you know that, based on all your years of experience in working with Nokia's customers, that that's what they look for. Right?

A. Yes.

Q. Like in Exhibit 18 where there's benefits and features touted, in Exhibit 21, Nokia touted the benefits and features that it thinks is a value-add and that it thinks customers will think is a value-add.

A. That is correct.

Q. And your group helps provide the substance that is in Exhibit 21. Right?

A. That is correct.

THE COURT: Does that complete this witness by deposition?

MR. BENNETT: Yes, Your Honor.

THE COURT: Call your next witness by deposition.

MR. BENNETT: We call Mustapha Aissaoui. He's a product line manager for Nokia. Total running time is 4

minutes, 39 seconds, with 4 minutes, 18 seconds charged to Plaintiff and 21 seconds charged to the Defendant.

THE COURT: Proceed with this witness by deposition, please.

MUSTAPHA AISSAOUI

BY VIDEO DEPOSITION

Q. Have you ever heard of Corrigent Systems, Limited?

A. No.

Q. And so your testimony is you have no knowledge of the '010 Patent.

A. Correct.

Q. Have you ever conducted an infringement analysis of the '010 Patent?

A. No.

Q. Do you have any knowledge of the '580 Patent or its contents?

A. No.

Q. Do you have any knowledge of the accused functions with respect to the '580 Patent and Nokia's networking equipment?

A. No.

Q. Have you ever done any kind of infringement analysis of the '580 Patent?

A. No.

Q. Do you understand what the accused products are in this case?

A. I believe I do, yeah.
Q. And what are those?
A. So I understand that these are the routers that we work on, and so, basically, a number of these router platforms.
Q. And what is your role in the development or design of these accused products?
A. So I'm a product line manager, and my job is to basically bring customer requirements and basically translate them to our development team so that they develop the -- the corresponding features.
Q. And do you have any factual basis or contention that the accused instrumentalities do not infringe the '010 Patent?
A. No.
Q. Do you have any factual basis of the accused instrumentalities do not infringe the '580 Patent?
A. No.
Q. What does VLL stand for?
A. It's -- it's, again, a standard word used in IETF standards, and it -- it's -- it refers to virtual leased line.
Q. Okay. And what does that mean?
A. It's really the equivalent of a point-to-point service, as we described earlier.
Q. What is ipipe? What does that mean?
A. So this is the Nokia terminology for an IP VLL.
Q. So are you aware of any customers that use the ipipe VLL?

A. Not off the top of my head. I mean, again, it's a possibility. These are all features that can be configured and enabled so it's certainly a possibility.
Q. I know it's configured. But when the router is sold, does it have the capability to do the things within this document?
A. So the -- so the code has -- has the features, but, again, as I said, it's not all configured. You need to configure that.
Q. And so you testified earlier that there were customer teams -- that -- when the equipment was sold to customers. Do you think they have any involvement in the configuration?
A. I'm not aware of that.
Q. Is it your understanding that the customer teams and the -- from Nokia and the customer representatives work together to design the configuration?
A. It's a possibility.
Q. And you're not a lawyer. Correct?
A. Yes.
Q. And you're here today to offer testimony about the factual basis for how Nokia's routers and switches operate with respect to the accused instrumentalities for the '010, which could include VLL, specifically apipe, ipipe, fpipe, or cpipe. Correct?
A. Correct.

Q. And you also testified earlier that you do not have any factual basis or contention that the accused instrumentalities do not infringe the '580 Patent. Do you remember testifying to that?

A. Yes.

Q. And you're here today to offer testimony about the factual basis for how the 7X series of Nokia products operate with respect to RSVP signaled point-to-multipoint LSPs. Is that correct?

A. Correct.

Q. And you have -- do you have any opinions regarding whether Nokia's products infringe or do not infringe the '010 Patent? Is that correct?

A. I don't have any opinion.

Q. And do you have any opinion that the Nokia products infringe or do not infringe, directly or indirectly, the '580 Patent? Is that correct?

A. Yes. I don't.

THE COURT: Does that complete this witness by deposition?

MR. BENNETT: Yes, Your Honor.

THE COURT: Call your next deposition witness, please.

MR. BENNETT: We call Alfred Nothaft, senior director of product management for the IP division; total run

time of 4 minutes, 21 seconds, 3 minutes 42 seconds allotted to Plaintiff; 38 seconds allotted to Defendant.

THE COURT: Senior direct product management at Nokia. Correct?

MR. BENNETT: Yes, Your Honor.

THE COURT: Proceed with this witness by deposition.

ALFRED NORTHAFT

BY VIDEO DEPOSITION

Q. And you testified you're the senior director of product management at Nokia?

A. I am.

Q. And what products do you manage?

A. I manage the software, the SR-OS for the 77 -- 7750, the 7950, the 7450, the 7250, and I'm also very familiar with the 7210 and the 7705.

Q. Now, you threw out a term. It was the SR-0S.

A. Yes. That's the name of our software.

Q. Okay. And is that an operating system?

A. It is.

Q. And 'SR' stands for 'service router'. Is that correct?

A. That's correct.

Q. Okay. So what is a service router?

A. A service router is a product that we -- we brought to market originally back in 2003. It was focused on providing layer 2/layer 3 VPN services, core routing broadbrand

services, and so forth.
Q. What are your day-to-day responsibilities as the -- as the director of product management?
A. I look over the -- the introduction of new feature functionality into the -- into the SR-OS software and, as a result, the products thereunder.
Q. And how often do you interact with customers?
A. It varies. Often they will go to our facility in Sunnyvale, and we have an executive briefing center there, and we'll typically host a customer there. And I'll typically travel there every two to three weeks or so. There might be other meetings in between.
Q. And what's the purpose of your interactions with the customers?
A. Typically it's to talk about current development of the features, new functionalities that we may be coming up with, new types of cards, et cetera.
Q. And is the 7705 service aggregation router something that you're familiar with?
A. I am.
Q. Is that one of the products that you manage?
A. Yes, through SR-OS, yes.
Q. Okay. And what does release 21.4.R mean?
A. That would designate that it was the annual release of SR-OS for this platform released in 2000 -- or 2021 in the

-- April. And it's the first maintenance release.
Q. Do all of the routers that you manage use the SR-OS?
A. Yes.
Q. Do they all use the same version of the SR-OS?
A. They are -- they all use a derivative of SR-OS. Some routers are smaller, and this is one of them.
Q. Do all routers have a host table?
A. As far as I know.
Q. And that would include the accused routers in this case?
A. All of the SR-OS devices would maintain a table of directly attached hosts or addresses.
Q. Do you know anything about the source code that's on the accused instrumentalities?
A. I guess the actual development of these -- of these features where, I think in the case of OSPF, was 20-plus years ago; for LFI, I think it was over 18 years ago. So I'm not aware of any developers from that period, but I am aware of the actual features, and I can certainly answer specific questions that you might have in -- in those regards.
Q. I guess what I'm asking is do you have knowledge of the source code that supports those features?
A. I don't have immediate knowledge of -- of the source code, if -- if that's the question.
Q. Have you ever read the claims of the '599?
A. I have not.

THE COURT: Does that complete this witness by deposition?

MR. BENNETT: It does, Your Honor.

THE COURT: All right. Ladies and gentlemen of the jury, we're going to break for lunch at this time. When we come back after lunch, we'll proceed with the Plaintiff's remaining case in chief, and I expect to be a live witness to start us off after lunch.

Take your notebooks, if you will, to the jury room over the lunch break. Please remember to follow all my instructions, including not to discuss the case among yourselves or with anyone else. We will attempt to reconvene close to about 12:45.

With that, ladies and gentlemen, you're excused for lunch.

(Whereupon, the jury left the courtroom.)

THE COURT: All right, counsel. Now that the jury's left, let me update you. As of right now, Plaintiff has used 2 hours, 35 minutes, and 39 seconds of designated trial time, and Defendant has used 2 hours, 47 minutes, and 7 seconds of designated trial time.

As I told the jury, we'll attempt to reconvene around 12:45.

Is there anything else we need to take up before we recess for lunch?

Anything from Plaintiff, Mr. Bennett?

MR. BENNETT: One issue. Yesterday as we were ending the first day of trial, I forgot to ask the Court to excuse Mr. Tamir. He's still here in Marshall. We do not have any intent to recall him at trial.

THE COURT: You're asking me to excuse him at this time?

MR. BENNETT: Yes.

THE COURT: All right. I assume there's no objection from the Defendant?

MR. DACUS: No objection, Your Honor.

THE COURT: Mr. Tamir is excused.

MR. BENNETT: Thank you, Your Honor.

THE COURT: Anything from Defendant before we recess for lunch?

MR. DACUS: No, Your Honor.

THE COURT: We stand in recess.

(Lunch recess.)

THE COURT: Be seated, please.

Is Plaintiff prepared to continue with its case in chief?

MR. BENNETT: Yes, Your Honor.

THE COURT: All right. Let's bring in the jury, please.

(Whereupon, the jury entered the courtroom.)

THE COURT: Welcome back from lunch, members of the jury. Please have a seat.

Let's go off the record for just a second.

(Discussion off the record.)

THE COURT: All right. Let's go back on the record.

Plaintiff, are you prepared to call your next witness?

MR. BENNETT: Yes, Your Honor. We call Dr. Ricardo Valerdi.

THE COURT: All right. Doctor Valerdi, if you'll come forward and be sworn, please.

(Whereupon, the oath was administered by the Clerk.)

THE COURT: Please come around, have a seat on the witness stand, sir.

MR. POMEROY: Your Honor, may I approach to pass the witness --

THE COURT: You may.

(Pause in proceedings.)

THE COURT: All right. Mr. Pomeroy, you may proceed with direct examination.

RICARDO VALERDI, Ph.D.,

having been duly sworn, testified under oath as follows:

DIRECT EXAMINATION

BY MR. POMEROY:

Q. Good afternoon, Doctor Valerdi. Could you please introduce yourself to the jury?

A. Yes. My name is Ricardo Valerdi. I am an engineering professor at the University of Arizona. I live in Tucson, Arizona, where I have three kids, ages 16, 14, and 12, and been married for 18 years.

Q. And can you please describe your educational background?

A. Yeah. I have a Bachelor of Science in electrical engineering from the University of San Diego, Master's of Science and System Architecture and Engineering from the University of Southern California, and a Ph.D. in industrial and systems engineering, also from USC.

Q. Now, Doctor Valerdi, before we get into your analysis, can you briefly summarize the conclusions you reached in this case?

A. Yes. So my conclusions are that Nokia's IP service routers infringe on the '580, '599, and '010 Patents.

Q. Now, you stated you work at the University of Arizona. What is your exact title at the University of Arizona?

A. I'm a professor and head of the Department of Systems and Industrial Engineering where I've been for 12 years.

THE COURT: Counsel, could you pull the microphone a little closer or speak up or both, please?

Q. (BY MR. POMEROY) And in your role teaching in the University of Arizona, do you teach any classes related to technology with the asserted patents?

A. Yes. I teach courses in product development and also

teach my students how to write software.

Q. In addition to your work as a professor, have you written any articles related to computer networks?

A. Yes, I have. So I put together the slides to show you just some examples. You've heard IEEE a lot, the Institute of Electrical and Electronics Engineers, so I published in one of their software publications, which is a peer-reviewed magazine called *IEEE Software.* So I've written about software development.

I've written also and presented research at conferences related to networks and computer networks and the communication use of those networks.

Q. So have you made research contributions to the field of computer networks?

A. Yes. In addition to my publications, I also took a sabbatical a few years ago and taught at West Point in New York and worked with the Army on a variety of projects that had to do with communications between soldiers in dense urban environments.

So this is where they may have to operate in a city where there's a lot of buildings. Soldiers need to be in constant communication with each other and with the forward operating base. And so we did a lot of research about how to make those networks more resilient and reliable for the war fighter.

Q. Besides your work as a professor currently, do you have

any other professional commitments?
A. Yes. So part of my sabbatical I mentioned was at West Point. The other part was working at Space X in Los Angeles on the Falcon 9 rocket.
And I also prior to getting my doctorate, I worked at the Aerospace Corporation, which is a federally-funded research and development center at the Los Angeles Air Force base, also deals with space systems and rockets.
And before I went to graduate school, my first job right out of college was as a systems engineer at Motorola, which is a communications company, and they use the technologies that are relevant to this case.
Q. Now, you're here today as an expert. Have large companies retained you as an expert in the field of computer networks?
A. Yes. I've served as an expert on cases before, most recently on a case for John Deere and a case for the U.S. Navy. Both had to do with software and source code, which is what I'm here to talk to you about today.
Q. Now, you spoke briefly about your work at Motorola. During your time at Motorola, did you ever contribute to designing and developing commercial routers?
A. Yes. So over 20 years ago as a starting engineer right out of college, I worked for Motorola's wireless communications division. And as part of that job, we would

design and implement both the wired network and the wireless network for public safety agencies.

Our biggest client was the Los Angeles Police Department. So you could think of a communications network encompassing both all of the radios that are out in the field, the antennas that speak to those radios, and all the back-end communications that talk to the 9-1-1 system and the dispatch center. And this is what we would build for clients like the LAPD.

Q. Now, beyond your professional commitments, do you have any charitable contributions related to math and science --

A. Yes. So I'm a massive sports fan, and I love the book *Moneyball*, and I watch as many baseball games as I can. So last week was very busy for me with opening day.

And what I did is I merged that passion with sports with my desire to get more kids interested in science, technology, engineering, and math, and I developed a program called the Science of Baseball, which uses baseball to teach geometry, physics, statistics, all of the things that elementary and middle school students need to learn anyway.

So we've partnered with the Texas Rangers on a program in west Dallas and also developed the spin-off related program with the Dallas Mavericks on the Science of Basketball teaching kids about free throw percentages and the aerodynamics of the basketball.

So these are programs that I'm very passionate about. They've sort of become my pet project. But over half a million students around the U.S. have used these kinds of programs to make math and science more fun and hands-on.

MR. POMEROY: Your Honor, at this time Plaintiffs tender Doctor Ricardo Valerdi as an expert in both computer networks and the subject matter of the asserted patents?

THE COURT: Is there objection?

MR. HAYNES: No objection.

THE COURT: Without objection, the Court will recognize this witness as an expert in those designated fields.

Please continue, counsel.

Q. (BY MR. POMEROY) Now, Doctor Valerdi, could you please explain what your task was in this case?

A. Yeah. My task was to compare the claims of the patents, the three that you've heard a lot about, the '580, '599, and '010, to Nokia's IP service routers.

And the key for me as an expert in software and computer networks was to use my knowledge as an engineer, as an academic, but also as a person of ordinary skill to determine whether Nokia's products practice what's written in these patents and specifically what's written in the claims of the patents.

Q. Now, you spoke about the claims. What are the claims of

the patent?

A. The claims are the numbered paragraphs that are at the end of the patents, and we're going to talk about some very specific ones. You may have heard some of them already referenced in the past day-and-a-half. But I'm going to dive into those details because they describe the actual functionality or the actual process that is of interest in each of the patents.

Q. How did you assess the meaning of the claims that you analyzed?

A. Yeah. The meaning is critical here, because in some cases the Court provides construction of how we should define certain terms in the patents, and that claim construction is actually in your binder. I will be referring to it when it is relevant.

In cases where the Court did not provide a definition, I used the plain and ordinary meaning of that term as a person of ordinary skill in the art.

Q. Now, Doctor Valerdi, what is a person of ordinary skill in the art in this case?

A. In this case, a person of ordinary skill in the art would be somebody with a Bachelor's degree in electrical engineering or related field, and at least two to three years of experience working in practice.

Q. Okay. So you mentioned the accused products. What

exactly are the accused products in this case?
A. The accused products broadly are the Nokia's IP service routers. Some of them are shown here: the 7250 on the left, the 7210 on the bottom left, the 7750 on the top right, the 7705 shown on the bottom right. And then there are two other families not shown here. But this is the best illustration to try to fit as many of the products on one page.
Q. Now, how did you determine all of these products infringe?
A. I arrived at that by looking at technical manuals of each of these products, by examining the deposition testimony of Nokia employees, their engineers, and managers; and also looking at the source code, which you've heard a lot about already, but I'm going to dive into those details.
Q. Now, Doctor Valerdi, I see a couple of boxes of -- that are labeled restricteDConfidential source code. Is that all the source code that you reviewed in this case?
A. No. I reviewed a lot of it. I think there are three boxes over there. Those are just the files that we requested to be printed, but that's probably less than one percent of the total source code that I reviewed. There is a ton of it, probably fill most of this courtroom with boxes if we brought the printouts.
Q. Now, in addition to the manuals and the code that you analyzed, did you look at anything else?

A. Yeah. As part of the process of analyzing the source code, there was also some configuration files or also referred to as test files that were provided by Nokia which are examples of how their customers configure or program their routers. And so I also analyzed that in order to determine if there was infringement.

Q. Now, are these files you just described the same type of files that were discussed earlier with Mr. Valley?

A. Yes, precisely the same ones.

Q. So, to summarize, you looked at the manual and other documentation for every product accused in this case.

A. That's correct.

Q. Did all of the documentation for each product show similar features of infringement?

A. Yes.

Q. And did what the manuals show align with your source code that you -- strike that.

And did the manuals align with the source code?

A. Yes.

Q. Sir, are you going to be walking through every single product that is accused today individually?

A. No, I'm not.

Q. Why is that?

A. Well, because of what you just asked me--all the products work the same way in terms of the accused functionality.

Q. Now, we've been talking about routers. If someone was to want to purchase a router from Nokia, what's the smallest thing that they could purchase?

A. Well, they would purchase the box. I like to call these pizza boxes because they are sort of that size. But as you can see from the figure, some of them are much larger than a pizza box. But you would essentially as a customer of Nokia purchase the box that you see here in this picture or examples you see here.

But what you're actually buying is the hardware that is inside that box and the software that is installed on that memory. So you're essentially buying both things--hardware and software.

Q. And what is the smallest component of the router that can infringe?

A. It's the router itself which contains both hardware and software.

Q. Let's first turn to the '580 Patent. Doctor Valerdi, what are you showing here?

A. So this is the top of the cover page of the '580 Patent. It has the full patent number, 7,463,580, on the top right; it has the date in which it was issued, December 9th, 2008. Then on the left side, it has the name of the patent which is Resource Sharing Among Network Tunnels, and then it lists the inventors.

So every patent has a format like this. You are going to be seeing this a couple of more times.

Q. Can you describe to the ladies and gentlemen of the jury what the '580 Patent is about?

A. Yeah. The '580 Patent is efficient sharing of resources. You've heard a lot about information moving through networks and the efficiency of that being very important. So a way to kind of describe this in very practical terms is traffic on a highway.

So say you're trying to get from point A to point B, but it's during rush hour or maybe there's an accident up ahead and so there's a congested road. Essentially what the '580 Patent allows traffic in a network to do now is to take a little detour and take an access road instead. But it has to be smart enough to know whether those access roads are available, whether it's beneficial to take that access road relative to the main road. And so it needs a lot more intelligence and processing power in order to make that determination.

Q. Now, with the technology disclosed in the '580 Patent, would that be used on small networks?

A. No, that would not. The technology here is designed for large networks. I'm talking about communications between buildings, between cities, between countries. It's really for large-scale, large-volume amounts of communication between

computers and between people using those computers.
Q. What are some of the benefits of the invention of the '580 Patent?
A. It's really about efficiency. It's about being able to scale and put more users on that network and be able to handle that traffic in a way that's intelligent.
Q. And what were some of the challenges that the '580 Patent solved?
A. Well, essentially before, there was resource sharing of paths that was available before the '580 Patent, but it was limited to only if you had the same origin point and the same destination. But as a result of the '580 Patent, that opened up a whole new series of possibilities, new access roads, new HOV lanes, new alternatives for that traffic to move through the network in a more intelligent way.
Q. So is the '580 Patent important to computer networks?
A. Absolutely it's critical basically because not all traffic should be treated the same. If you put an emergency call in or you call 9-1-1, you want that to be handled immediately, and you want somebody's Netflix download to be deprioritized.
Q. Doctor Valerdi, what are you showing here?
A. So this is an example of a figure that's contained in the '580 Patent. Every patent has a series of figures and it also has a written specification. Those all appear before the

actual numbered claims. So figures often are really helpful in understanding what it is the invention actually is trying to solve.

Here -- let me just point to you first to the yellow arc on the top. That illustrates that there is a certain shared resource that is possible between two communication links. And that really describes the prior art.

As I mentioned before, if you have the same origin and the same destination, you were able to share a resource well before the '580 Patent. But the invention that's taught by the '580 Patent opens up a whole new spectrum of options, and that's illustrated by all the other nodes and the green lines that are in this diagram.

I'm going to dive into the details of what that means in words, but I just wanted to show you more routes, more options, lead to the ability for a network to handle more traffic.

Q. Now let's turn to the first claim. Which Nokia products did you analyze for the '580 Patent?

A. The Nokia products that I mentioned earlier that most all of them start with 7, the IP service routers, all have software code that is residing inside that has all the rules and instructions about how the router will operate.

There were three versions of software that I looked at. There was the TMOS, there is the TMOS CSA, and the TMOS SAS.

And all of those three versions of software worked exactly the same in terms of the accused features that I'm going to talk about today.

Q. Doctor Valerdi, what are you showing here?

A. So in order to talk about this claim, claim 8 of the '580 Patent, rather than reading the entire contents of the claim, what I've done is I chunked it into pieces, A, B, C, and D. And so we're going to go one at a time. I'm going to come back to this table so that we can keep track.

So this will serve as our roadmap for the discussion. I'm going to start with element A, which begins with "A network element."

Q. Do the accused products have a network element comprising a network interface?

A. Yes, they do.

Q. And does this network element communicate with other elements in a communication network?

A. Yes, they do. And let me just explain the format of the slide since this is a format you're going to be seeing over and over.

On the very top, you see is the actual claim element from the '580 Patent. But anything below that is information that I'm providing that supports the opinion that this claim element is met and that the product infringes.

So just to be extra clear, in the case where I have a

Nokia technical manual or Nokia source code, I've added the Nokia logo. Okay? So in this case because this claim element requires having a network element and corresponding interface to a network, I've highlighted the claim element part in green, and then the supporting evidence is also in green. So it should be very easy for you to match word for word or concept to concept.

So on the left side, you'll see this is a snapshot of Nokia's 7750 service router. That's one of the accused products. I've highlighted the term IP network, which confirms that this is a network element that's connected to an internet protocol network.

And on the right side is another screenshot, again connecting the claim language, which is this router is a fully programmable network processor, and it also calls out the software operating system, which is the Nokia service router operating system, also known as SR-OS for the 7750.

Q. And is the 7750 one of the accused products in this case?

A. Yes.

Q. So what is your conclusion about claim element 8A of the '580 Patent?

A. So my conclusion here is that this claim element is met and this product infringes. So we're going to put a checkmark next to that claim element just to keep track of the ones that we've talked about so far.

Q. So what's the next limitation that you analyzed?
A. So limitation B starts with, "A processor." And we're going to unpack that in the next few slides.
Q. Do the accused products contain a processor?
A. Yes. So, again, a screenshot from Nokia's own technical documentation that emphasizes the fact that this is a network processor.
Q. Now, I see the document says a fully programmable network processor. What does programmable mean?
A. So that means that you can install software into that network processor so that it will execute specific commands that you've preprogrammed.
Q. And when you refer to the software, are you referring to the source code that you analyzed?
A. Yeah. And I should clarify that because I think those terms are used interchangeably. Source code, I'm going to be showing some of that in my slides. Source code is the actual instructions that a computer programmer writes that they want those steps to be followed in a very specific order.

Once that source code is complete and tested and the programmer is satisfied that it's ready to go, then it gets installed onto a computer or, in this case, a network processor. And so that's what we call software.

So the software itself is what -- what is executed and runs all these commands that have already been pre-determined

by a computer programmer well in advance.

Q. So let's move on to the next portion of claim element 8B. Do the accused Nokia products have processors that are arranged to accept a notification distributed over a communication via the network interface?

A. Yes, they do.

Q. And how do you know that?

A. I know that because the Nokia IP service routers use an RSVP protocol which sends notifications and then receives notifications. So the first part of that handshake of send/receive are the path messages.

And you'll see here the excerpt from Nokia's technical manuals, they refer to the path messages containing signaling information. And those signals are the ones that are being sent through the network interface and distributed to other components in the network.

Q. Now, the claim element also has a resource sharing group. What is a resource sharing group?

A. So the second part of the notification is the receipt of an acknowledgment. And I've highlighted here from Nokia's technical manuals the RESV, which is also another type of message that contains information about a resource-sharing group. So this is sort of the part two of the send/receive handshake, and this is the -- the notification that's mentioned in the patent language.

MR. POMEROY: Your Honor, at this time we'll be getting into the confidential source code, so I'd ask to seal the courtroom.

THE COURT: All right. Based on counsel's request and to protect confidential information, I'll order the courtroom and the record sealed at this time.

Those present in the courtroom who are not subject to the protective order in this case should exit the courtroom and remain outside until it's reopened and unsealed.

(Courtroom sealed.)

(Courtroom unsealed.)

THE COURT: Having done that, ladies and gentlemen of the jury, I'm going to ask you simply to leave your notebooks in your chairs, follow all the instructions I've given you about your behavior and your conduct as jurors, and we'll be back shortly to continue with the direct examination of the witness.

The jury's excused for recess.

(Whereupon, the jury left the courtroom.)

THE COURT: All right. The Court stands in recess.

(Brief recess.)

THE COURT: Be seated, please.

Are you prepared to continue with your direct examination, Mr. Pomeroy?

MR. POMEROY: Yes, Your Honor.

THE COURT: All right. Let's bring in the jury.

(Whereupon, the jury entered the courtroom.)

THE COURT: Please be seated.

All right, counsel. You may continue with your direct examination of Doctor Valerdi.

MR. POMEROY: Thank you, Your Honor.

Mr. Jarrett, could you return to the slides?

Q. (BY MR. POMEROY) Now, Doctor Valerdi, we left off with

your conclusion for claim 2 of the '010 Patent. What is your conclusion with respect to claim 2 of the '010 Patent?

A. My conclusion is that both the required dependent claim element and claim element A are met. So we put green checkmarks next to them because they infringe by Nokia's products.

Q. So we look at one more claim of the '010 Patent. What is that claim?

A. This is claim 3.

Q. And is claim 3 a dependent claim?

A. Yes, it also is a dependent claim because it depends on claim 2.

Q. So in order to infringe claim 3, does both claim 1 and claim 2 have to infringe?

A. Yes.

THE COURT: Counsel, before we recessed, I unsealed the courtroom. Are you going to go back into confidential information?

MR. POMEROY: Very briefly, and I will let you know, Your Honor.

THE COURT: All right. Let me know. I just didn't want you to accidentally cover something confidential in the open record.

MR. POMEROY: Understood, Your Honor.

THE COURT: All right.

Q. (BY MR. POMEROY) Doctor Valerdi, what does claim 3 of the '010 Patent require?
A. This is -- claim element A requires one of a variety of protocols being used, which I will elaborate.
Q. And what are you showing here?
A. The language of the claim element suggests -- it states that it could be any of these layer 2 protocols. That's what the "from a group of protocols consisting of" mean. So there are a variety of protocols mentioned in Nokia's technical documentation.
Q. Now, I see here you underline in orange ethernet pipe. Is the ethernet pipe the ethernet protocol that's highlighted?
A. Yes.
Q. And is the apipe referring to the ATM protocol?
A. Yes.
Q. And is the frame relay or fpipe referring to the frame relay protocol?
A. Yes.
Q. And then I see it states point-to-point or PPP. Is that referring to a point-to-point protocol?
A. Yes.
MR. POMEROY: Your Honor, I promise it's brief. I need to seal the courtroom.
THE COURT: All right. Based on that request and to protect the confidential information, I'll order the courtroom

sealed, which will seal this portion of the record.

I'll direct that all persons not subject to the protective order that's been entered in this case to excuse themselves and remain outside the courtroom until it's reopened and unsealed.

(Courtroom sealed.)

(Courtroom unsealed.)

THE COURT: All right, counsel. We are unsealed. Please continue.

Q. (BY MR. POMEROY) Doctor Valerdi, are you finished with your infringement analysis with respect to the accused Nokia products compared to the asserted patents?

A. Yes.

Q. Okay. So let's just reset. Besides that analysis with respect to the Nokia products, were you asked to do anything else in this case as your role as an expert?

A. Yes.

Q. So what was your task with respect to the Orckit-Corrigent routers?

A. I was asked to also look back retrospectively at some of the Orckit-Corrigent routers to see if they practiced any of the teachings of the patents-at-issue in this case.

Q. Now, Doctor Valerdi, the case is Smart Path v. Nokia. Why did you analyze the Orckit patent or the Orckit products?

A. Because the inventors of the patents worked for Orckit, Orckit-Corrigent, and the products that I was asked to evaluate were made by that same company.

Q. Now, does this analysis have anything to do with your infringement analysis as applied to Nokia's products?
A. No.
Q. Were you here when Mr. Tamir testified yesterday about certain Orckit-Corrigent products?
A. Yes.
Q. And what is your understanding of these products?
A. That they were sold out of Israel and the -- there was two families of products, the CM-100 and the CM-4000. I think he was shown a physical box of the CM-4000, and my understanding is that the CM-4000 family were sufficiently marked with the patents that are at issue in this case.
Q. Now let's start with the CM-4000 series of products. Did you analyze the CM-4000 products to see if they embodied the asserted patents?
A. No.
Q. And why did you not do that?
A. Because they were adequately marked as shown by this label.
Q. And is this the same label that you were showing?
A. Yes.
Q. And on the bottom right, we see the '580 Patent?
A. That's right.
Q. And if you look at the second-to-most bottom row on the left, you see the '010 Patent at the very left?

A. Yes.
Q. And then very next to that on the right, you have the '599 Patent?
A. Correct.
Q. Do you recall Mr. Tamir's testimony with respect to the CM-100 product?
A. Yes.
Q. And what were you asked to do with respect to the CM-100 product?
A. I was asked to determine whether the CM-100 product practiced any of the teachings of the three patents-at-issue.
Q. Now, what documentation did you use to analyze the CM-100 products?
A. I was provided with a manual of the CM-100, which I'm showing here, dated March 2009.
Q. Did you review any source code for these products?
A. No.
Q. Why not?
A. It wasn't made available.
Q. Now, let's just turn to your analysis of the CM-100 with respect to the '580 Patent. What did you look at with respect to CM-100 for the '580 Patent?
A. I looked at some of the elements of claim 15.
Q. And did you analyze all the claims in the '580 Patent?
A. No.

Q. And what are you showing here?
A. What I'm showing here is that the CM-100 describes a more limited functionality than what is taught in the '580 Patent. I've underlined a couple of key sentences, such as the end-to-end technology. That is a more constrained and limited functionality than what is taught in the '580 Patent. And also the way that the resource reservation done is not exactly the same as is described in the '580 Patent.
Q. Now, Doctor Valerdi, do you recall the '580 Patent's limitations having two tunnels that traverse different routes?
A. Yes.
Q. Does anything in here show two tunnels traversing different routes?
A. No.
Q. So what's your conclusion with respect to the CM-100 embodying the '580 Patent?
A. That it does not practice element B or element C of claim 15, I think it was.
Q. And would this analysis for claim 15 apply to all of the other claims?
A. Yes, they do.
Q. Now let's turn to the '599 Patent as applied to your analysis of the CM-100 product. Did you look at all of the claims of the '599 Patent with respect to your analysis of the CM-100 product?

A. No.
Q. And what are you showing here?
A. I'm showing an excerpt from the CM-100 manual that describes how the cost is utilized within this CM-100 OSPF algorithm, which is the open shortest path first, and I've underlined some of the key sentences from that page.
Q. Now, I recall the '599 Patent had a lot of talk about a host table. Do you see a host table here?
A. No, there's no mention of any host table.
Q. And even if there was a host table, do you see any host table that stores an entry that has both an address and a metric?
A. No, I don't see those, either.
Q. So what was your conclusion with respect to the CM-100 embodying the '599 Patent?
A. That it does not practice elements B or D of the specific claim of the '599 Patent.
Q. Now, the last claim that we've spoken about, the '010 Patent, did you analyze the CM-100 product against the '010 Patent?
A. Yes.
Q. So what were the results of your analysis?
A. That there was no practice of the embodiment of the -- or the teachings of the '010 Patent. I've underlined a couple of key terms that I found in the manual.

Q. So I see here it says TDM ports. The claim requires a TDM interface with respect to the native interfaces. Did you find that the network port comprising ethernet port and that one or more of the native interfaces comprise at least one of the TDM interface?

A. There's mention of TDM ports but not a TDM interface in the CM-100.

Q. So what was your conclusion with respect to if the CM-100 embodied the '010 Patent?

A. It does not because it has to meet all the claims, and just the fact that it does not meet claim element I of claim 1 means that it does not practice the teachings of this patent.

Q. Now, I just want to turn back to your infringement analysis of Nokia's accused products.

Could you summarize your conclusion with respect to your analysis of the '580 Patent as applied to the Nokia accused products?

A. My opinion is that the six families of accused products infringe the '580 Patent.

Q. And with respect to the '599 Patent, could you please provide a summary of your findings of your analysis of the Nokia accused products?

A. My opinion is that the six families of Nokia's IP service routers infringe the '599 Patent.

Q. And with respect to the '010 Patent, could you please

just describe your findings of your analysis as applied to the Nokia's accused products?

A. My opinion is that the six families of IP service routers made by Nokia infringe the '010 Patent.

MR. POMEROY: Your Honor, I pass the witness.

THE COURT: All right. Cross examination by the Defendant. If you have binders to distribute, counsel, let's do that now.

(Pause in proceedings.)

MR. HAYNES: May I proceed, Your Honor?

THE COURT: As soon as your co-counsel gets seated. All right. Let's proceed with cross examination.

MR. HAYNES: Thank you, Your Honor.

CROSS EXAMINATION

BY MR. HAYNES:

Q. Good afternoon, Mr. Valerdi -- or Doctor Valerdi. Sorry.

A. Good afternoon.

Q. I want to pick up right where you ended on this subject of patent marking.

You were in the courtroom when Mr. Tamir testified. Correct?

A. Yes.

Q. And you did not hear Mr. Tamir identify a single CM-401x product that was marked with a patent label. Correct?

A. I remember him being asked about it, and if I remember

correctly, that's the device that you-all showed him.

Q. That's -- I showed him an example of that device, but I also asked him that, "Mr. Tamir, you did not identify any evidence showing that a CM-401x product had been marked."

Do you recall that his answer was, "I have no evidence of that"?

A. I remember him saying that, yes.

Q. Okay. Now, you talked a little bit today about the CM-100 product. Correct?

A. Yes.

Q. And that product was sold in the United States beginning in 2004, and the sales kept going all the way to I believe it was 2011. Does that sound right to you?

A. That sounds right.

Q. And if I heard your testimony right here today, you said that the CM-100 product line did not practice any of the three patents-in-suit. Correct?

A. That's correct.

Q. And you understand -- well, you were in the courtroom and you heard Plaintiff's counsel talk about how innovative the features of the three patents-in-suit are and how important they were to the entire industry. You recall that testimony generally?

A. Yes.

Q. You understand that Orckit did not put those features

into its own biggest selling product. Correct?
A. I don't know if it was their biggest selling product, but I see your point about the features. I don't think they put them in there.
Q. Now, we also walked through one of the manuals for that CM-100 product. I want to bring up a couple of pictures from that.
MR. HAYNES: If we could look at PX 30-2 on page 25. If we could just bring that figure up at the top here.
THE WITNESS: That's not in the binder?
Q. (BY MR. HAYNES) Your counsel used it so it might be in the binder that they used.
I haven't asked the question yet, but I'm about to.
Sir, this came out of that CM-100 manual that you analyzed. Correct?
A. Yes.
Q. And what this is describing is actually a triple play service that was offered by Orckit. Right?
A. Yes, I see that on the right side.
Q. And if we look at this figure, this figure kind of looks similar to the figures that we've been seeing from the patent and even the figure we saw in Nokia's product. Right?
A. I don't know what similarity you're pointing to, but if you want to be more specific, I can comment on that.
Q. I can try to. You see on the left here, there's a CM-100

PTS, and on the right there's a CM-100 PTS? Do you see that?
A. Yes.
Q. You understand those are edge devices or edge routers?
A. Yes.
Q. Okay. And you look on the left there, that CM-100 is connected to a TDM network and an ethernet network and a voice network. Do you see that?
A. Yes.
Q. You understand that those are client edge devices?
A. Yes, that's fair.
Q. You understand on the right of that CM-100 router, I've got an ethernet connection. Do you see that?
A. Yes.
Q. Now, so we're going to talk about similarities. What I just described I believe was every single element that you pointed to in the figure of Nokia's patent.
A. If you can be more specific about which patent?
Q. Well, for the triple play, the patent that you accused of infringing the -- the patent for which you have accused the triple play feature in Nokia's products.
THE COURT: Mr. Haynes, could you slow down some?
MR. HAYNES: I will do so, Your Honor. Thank you.
THE COURT: Thank you. Please do.
Q. (BY MR. HAYNES) Actually let me try this again. Let's talk about the '010 Patent, the patent that requires a hub.

Okay?

A. Okay.

Q. All right. Now, for the '010 Patent, that requires edge devices and a hub. Right?

A. Yes.

Q. And under your definition of a hub, a hub is any device that connects two other devices. Is that right?

A. Yes, I said something like that. I didn't quantify it as two, but I can get behind that.

Q. Okay. So let me see if I can identify the hubs in this figure if I were to apply your definition of that term. Okay? So under your definition, this would be a hub?

A. Yes.

Q. And this would be a hub?

A. Yes.

Q. And this would be a hub?

A. Yes.

Q. And this would be a hub?

A. Yes.

Q. And, in fact, if I look above these boxes on the TDM network at the top there, I can go out -- those would actually be connected to client devices on the outside, the top up here. Do you agree with that?

A. Yes, I agree with that.

Q. Okay. So if these are connected to other devices that

are connected in the network, this would also be a hub. Right?

A. It depends on what role it plays in the network. So if you've added a bunch of other connections, then yes, it's acting as a hub.

Q. Okay. And if I put -- if this device here, the layer 2, layer 3 MSE, that's also going to be connected to some other devices on the left over there. Right?

A. Presumably, yes.

Q. And if I use your definition of a hub, this is a hub, too. Right?

A. It could be.

Q. Okay. I can keep going, but I'll stop there.

So everything that I drew a red circle on this figure under your definition would satisfy the meaning of a hub under the '010 Patent. Is that fair?

A. I think that's fair, what you've drawn so far, yes.

Q. Okay. Sorry for my handwriting. It's really bad.

A. I can read it.

THE COURT: All right. We've got better things to do than talk about your handwriting. Let's move on.

MR. HAYNES: Apologies, Your Honor.

We can take that exhibit down.

Q. (BY MR. HAYNES) Now, you heard Mr. Dacus in his opening statement talk to the jury about how in patent infringement

cases, the details matter. Right?
A. Yes.
Q. And you agree with that. Right?
A. Absolutely.
Q. The words of the claims, they matter. Right?
A. Yes.
Q. And to infringe a patent claim, when you did your analysis, you needed to make sure that every single element of the claim was present in the devices you were accusing of infringement. Correct?
A. That's correct.
Q. And if even one thing was missing, that would mean no infringement. Correct?
A. For that claim, correct.
Q. Okay.
MR. HAYNES: Let's look at ID 2176, one of the slides that you used, I believe.
Do you recall this slide generally when you were talking about whether or not Nokia's products satisfied the limitation requiring a hub?
A. Yes.
Q. Okay. And what you identified as a hub is the green box on the right side here above the Nokia diagram. Is that right?
A. Yes.

Q. Okay. That box is actually a router. Correct?
A. It's labeled as a router, but it's operating as a hub and a router.
Q. But when Nokia sells that box, it is sold as a router. Correct?
A. I agree with that.
Q. And your theory is not that this router is a hub device; your theory is that it is operating as a hub. Is that fair?
A. That's fair, and I can explain further if you'd like.
Q. Now, I don't want to draw a bunch of circles again, but you would agree with me that I could, if I wanted to, under your definition draw a circle around every one of these devices and they would be hubs, too, as you used that term. Correct?
A. No.
Q. Well, you would at least agree with me that under your definition of hub, this would be a hub. Correct?
A. I would say that is also operating as a hub, yes.
Q. Okay. And under your definition of a hub, every single Nokia router that it sells is also a hub, in your view. Correct?
A. No, because the hub has to be a role that that device is playing in the network. So if it was an edge device like the customer edge that you suggested you might draw a circle around, that is not a hub. But if, instead of a customer edge

device, it was a Nokia router, it's only connected to one element, one other element in the network, that is not operating as a hub.

Q. But you didn't perform an analysis to determine how each one of Nokia's routers is actually being used out in the customer networks. Right?

A. Wrong.

Q. Is it your belief that every single one of Nokia's routers that is being used in any customer network is a hub?

A. I looked at configuration files that would suggest that many of them, at least the configuration files that I looked at of routers, are also operating as hubs.

Q. Okay. Fair to say that all of the routers that you allege to infringe in this case satisfy your definition of hubs. Correct?

A. Yes, they do. I've also seen Nokia manuals that refer to routers as hubs, and I can show you that if you'd like.

MR. HAYNES: Move to strike as non-responsive, Your Honor.

THE COURT: When the witness says, yes, they do, that's responsive.

When he goes further and says, I've also seen Nokia manuals that refer to routers as hubs, that's non-responsive and I'll sustain the objection as to that remaining or latter portion of the answer and strike it.

Doctor, if he wants you to explain something further, he'll ask you for it. You don't need to volunteer. You have additional support for your comments. And Mr. Pomeroy has an opportunity to come back up later and he may want you to explain further, but he'll make that decision. You don't need to offer that spontaneously.

Just limit your answers to the questions asked, please.

THE WITNESS: Understood, Your Honor.

THE COURT: All right. Let's proceed.

Q. (BY MR. HAYNES) Now, Doctor Valerdi, you understand that hub network devices were well-known long before the Smart Path -- sorry. Let me try that again.

You know that hub network devices were known long before Orckit-Corrigent filed for the three patents that are accused of -- asserted in this case. Correct?

A. Yes.

Q. And I think you said on your direct testimony that the Court did not construe that word 'hub' in this case. Correct?

A. That's correct.

Q. And so the definition of hub that you should have applied in this case is the definition to a person of ordinary skill in the art at that time, the plain meaning of the term. Correct?

A. That's correct.

Q. And that's what you attempted to do. Correct? You

attempted to apply the plain meaning of the term 'hub' as a person of ordinary skill in the art would have understood it at the time of the invention. Correct?

A. Yes.

Q. Now, you know, sir, at the time of the alleged inventions here, a hub device and a router were understood to be very different things. Correct?

A. Yes, and I agree with that.

Q. Now, you're currently the department head of the systems and industrial engineering at the University of Arizona?

A. Yes.

Q. And you -- do you teach classes on computer networks there?

A. Product development, which includes computer networks, yes.

Q. Okay. Are you aware that one of the textbooks that are used at the University of Arizona to teach computer networking is a book by a Mr. Kurose and Mr. Ross titled, *Computer Networking: A Top-down Approach?*

A. I'm not aware of that class.

Q. You're familiar with that book, though, aren't you?

A. No.

Q. You didn't look at that book in your consideration of the materials in this case?

A. Not that specific book, no.

MR. HAYNES: Let me bring up --

Q. (BY MR. HAYNES) Actually in your binder you have a printout from the University of Arizona College of Engineering, Electrical and Computer Engineering.

A. I see it.

Q. Were you able to find that? I want you to take a look at that. Does that refresh your memory as to what books are used to teach computer networking at the University of Arizona?

A. Yes.

Q. Okay. You see there that there's a book authored by Mr. Kurose and Mr. Ross?

A. Could you point me to the page?

Q. Sure. It's on the very first page under references. Well, let me back up. You see there's a course, Fundamentals of Computer Networks, that's being taught. Correct?

A. Oh, yeah, I see on the top of the second page, yes.

Q. Yeah. And if you go down, there's a section that says, Course text, and then it has some references. And the very last book that's listed there is entitled *Computer Networking: A Top-down Approach,* Seventh Edition, Kurose and K. Ross, 2017. Do you see that?

A. Yes.

Q. Okay. So you understand that that is a textbook that the University of Arizona uses to teach its students computer networking. Correct?

A. Correct.
Q. And you would agree with me that is the kind of text that people in the industry would deem to be reliable?
A. Yes.
Q. Okay.
MR. HAYNES: Can we bring up DX 14?
Q. (BY MR. HAYNES) This is the front cover of the book we were just talking about. Correct, sir?
A. That's correct.
Q. Now, I want to direct your attention inside this book to page 470.
MR. HAYNES: And then if we can bring and highlight the paragraph that begins, "By the late 1990s." Do you see there where it states, "By the late 1990s most companies and universities had replaced their LANs with ethernet installations using a hub-based star topology. In such an installation, the host (and routers) are directly connected to a hub with twisted-pair copper wire."
Do you see that?
A. Yes.
Q. Then it goes on in the next sentence to state, "A hub is a physical-layer device that acts on individual bits rather than frames."
Do you see that?
A. Yes.

Q. And you agree with me that that definition of hub is an accurate definition. Correct?
A. Yes, I would agree with it.
Q. Okay. Now, the next sentence goes on and describes what that hub device does. It states, "When a bit, representing a zero or a one, arrives from one interface, the hub simply recreates the bit, boosts its energy strength, and transmits the bit on to all other interfaces."
Do you see that?
A. Yes.
Q. And you would agree with me that that is an accurate description of what a hub device actually does. Correct?
A. Yes. I agree with everything you've read from this book.
Q. All right. Bear with me. I'm almost done.
The next sentence says, "Thus, ethernet with a hub-based star topology is also a broadcast LAN--whenever a hub receives a bit from one of its interfaces, it sends a copy out on all of its other interfaces."
Do you see that?
A. Yes.
Q. Okay.
MR. HAYNES: Now we can back out. I want to go to a couple of paragraphs down on the same page. Just the very bottom where it says, "In the early 2000s."
Q. (BY MR. HAYNES) Do you see there it says, "In the early

2000s, ethernet experienced yet another major evolutionary change. Ethernet installations continued to use a star topology, but the hub at the center was replaced with a switch."

Do you see that?

A. Yes.

Q. And you understand that to be describing that in the early 2000s, the computer networking world was moving away from hub devices and moving towards smarter devices like switches and routers. Correct?

A. Yes.

Q. Let's look at the next sentence. It says, "We'll be examining switched ethernet in depth later in this chapter. For now, we only mention that a switch is not only collision-less, but is also a bona fide store-and-forward packet switch."

So that is an accurate description of a switch network device. Correct?

A. That's correct.

Q. Then the book goes on, and it says, "But unlike routers, which operate up through layer 3, a switch operates only up through layer 2."

Do you see that?

A. Yes.

Q. And that sentence is distinguishing a router from a

switch. Correct?

A. That's correct.

Q. And you understand that this textbook is talking about three different kinds of network devices. Correct?

A. Yes.

Q. Now, let me ask you this. In the early 2000s when the hubs were getting pulled out of computer networks, would the definitions that we just read have been understood by a person of ordinary skill in the art at that time?

A. I believe they would. These definitions have not changed.

MR. HAYNES: Now, if we could go back to the JX 01, which is a copy of the '010 Patent. And if we could go to the next page to figure 1 and just blow it up, please.

Q. (BY MR. HAYNES) Do you recognize this, sir, as figure 1 of the '010 Patent?

A. Yes.

Q. And you see on the right there, it says network device (hub)?

A. Yes.

Q. So you understand when the claims are referring to a hub, they are referring to a hub network device. Correct?

A. Yes.

MR. HAYNES: If we could bring up claim 1 of the '010 Patent, please, Mr. Carrillo.

Q. (BY MR. HAYNES) Now, one of the things that I took away from your testimony on direct examination was that one of the things that claim 1 requires, in addition to having a hub, is it needs to have an edge device that is configured to receive multiple different layer 2 protocols. Is that fair?
A. Yes.
Q. And you understand that in modern computer networks, ethernet is king. Right?
A. Yes, I do.
Q. The old layer 2 networks, ATM, TDM, that is old news. Right?
A. To some extent it's not a moneymaker anymore.
Q. Networks have moved away from those old layer 2 networks. Now they're coming into the ethernet world because everybody is doing IP. Fair enough?
A. Yes, with exceptions there's some legacy systems out there that may still practice that. But the newer networks, I would agree with you.
Q. Right. So there may be some old legacy networks out there that can't afford to throw away, they've been out there since the '90s, so they may still be out there. But if I'm selling new equipment, I'm not installing ATM networks, am I?
A. From this day forward, probably not.
Q. Go back five years. Still not doing it. Right?
A. Unlikely, yes.

Q. Go back 10 years. Still not doing it. Right?
A. I wouldn't go that far.
Q. All right. Give me five. I'll take that, sir.
Okay. For routers that Nokia has sold in the last five years, you would agree if that's a new customer network, it's not likely to have ATM or TDM in it. Right?
A. I'm thinking about your question because if it's in relation to claim 1, what matters is whether it's compatible to those other protocols. So could you just clarify whether you were just asking it in isolation or in relation to claim 1?
Q. Let me try asking it this way see if this helps. Okay?
If I sell a bunch of routers to AT&T, and that network is only ethernet, there is not a single device in the network that I have sold them or that it is connected to that is anything other than ethernet, you would agree with me that those routers are not configured to satisfy the elements of claim 1. Correct?
A. No.
Q. Okay. So you would still say that in that all-ethernet network, those routers that aren't doing any protocol conversion whatsoever, those would still infringe in your view. It's a yes or no, sir.
A. If they have a source code that I examined that's the basis of my reference, then, yes, they would infringe.

Q. All right. Okay. I'd like to switch patents on you now and talk a little bit about the '599 Patent. Is that okay, sir?

A. Yes.

MR. HAYNES: Could we bring up the '599 Patent?

Q. (BY MR. HAYNES) Now, the title of the '599 Patent is Layer 3 Network Routing with RPR Layer 2 Visibility. Do you see that?

A. Yes.

Q. I didn't hear you in your direct testimony talk very much about the title of this patent or this notion of visibility. Is that fair?

A. No, I did mention that.

Q. Okay. Let me see if I can get a little more detail on it.

MR. HAYNES: If we can go to the next figure 2 -- sorry, figure 1 of this patent?

Q. (BY MR. HAYNES) Now, when we talk about the layer 2 ring network in the '010 Patent, that is comprised of the routers we see that are connected together with these lines here. Correct?

A. That's correct.

Q. And you understand that in this layer 2 ring network, there is a layer 2 connection that connects each of these routers together in this ring. Correct?

A. Yes.
Q. That's what makes it a layer 2 ring network. Right?
A. Correct.
Q. Now, the patent itself talks about a problem that the inventors perceived in the industry. Do you recall that?
A. Yes.
Q. And that problem was I had these routers, the layer 2 routers in this ring, but those routers did not have visibility to this external network over here and the ways in which they could route things from the layer 2 network to the layer 3 network. Is that fair?
A. Yes.
Q. And, in particular, in the ring structure of this patent, there were three different connection points out to the external network. Right?
A. Yes.
Q. And the patent describes each of these connection points as egress nodes. Correct?
A. That's correct.
Q. And what egress node refers to is that is the node of a ring network where traffic can actually exit that ring and get outside to a different network. Right?
A. Correct.
Q. And the problem that the '010 Patent was trying to solve was that if I wanted to send something from this node over

here, I didn't have enough information about how to route over on these links so that I knew what my best path was. And so I couldn't tell whether I should go like this or like this or even like this. Right? That was the problem.

A. Agreed.

Q. And that was because these nodes that were not connected as egress nodes in the ring, these guys, had no visibility to the structure or the route cost of these external links. Right?

A. That's correct.

Q. And that's what the title of the patent is talking about when it talks about visibility. Right?

A. Yes.

Q. And, in particular, what this patent was about was when I'm in a ring network, I need to figure out the easiest path to get out of the network, I need to know which egress node to use.

MR. POMEROY: Your Honor, may we approach?

THE COURT: Approach the bench.

(The following was had outside the hearing of the jury.)

THE COURT: What is it, counsel?

MR. POMEROY: Your Honor, I believe this is violating Court MIL 18. He's attempting to use the specification for non-infringement.

THE COURT: All right. What's your response, Mr. Haynes?

MR. HAYNES: Your Honor, I'm describing the problem that existed in the prior art. It's background. This description that I'm doing is in the background of the specification of this patent.

THE COURT: I'm going to overrule your objection at this time, Mr. Pomeroy, but if this ceases to be background and transitions into improper comparison, I'll certainly sustain a similar objection in the future. Okay?

MR. POMEROY: Understood, Your Honor.

THE COURT: All right.

(The following was had in the presence and hearing of the jury.)

THE COURT: Let's continue.

Q. (BY MR. HAYNES) So, Doctor Valerdi, you would agree with me that the problem that the patent was identifying was that in one of these nodes that is not an egress node of the layer 2 ring network, I don't know the best path out over to this external network. Right?

A. Yes.

MR. HAYNES: Can we bring up claim 59?

Q. (BY MR. HAYNES) This is the claim that's been asserted in this case. Correct?

A. That's correct.

MR. HAYNES: And would it be possible to put claim 59 on the left side and that figure on the right?

MR. POMEROY: Your Honor, may we approach? I object for the same reasons illustrated before.

THE COURT: I can't hear you, counsel.

MR. POMEROY: Your Honor, may we approach? The objection that I raised before.

THE COURT: Well, I recall the objection you raised before.

Why are we still in the area of background here, Mr. Haynes? Why are we not moving to a direct comparison if you're going to put these side by side?

MR. HAYNES: Your Honor, my intention is to show using the claim language and use an example in the embodiment to illustrate so the jury can understand when it refers to these terms, what an example of that would look like.

I'm not going to suggest that is the only way that you could do it, but that is an example. That's the example that's given in the patent for how this works.

THE COURT: Well, I'll allow it with the following clarification for the benefit of the jury: Patent specifications typically, ladies and gentlemen, contain within them something called a preferred embodiment. It's a suggested way to do what the patent covers. That's not the only way, and the patent claims are not limited to the

embodiment set forth in the specification; it's just an illustration.

So I'm going to permit Mr. Haynes to show you that embodiment compared to the claim language for purposes of illustrating things, but I want you to understand that in no way limits or hinders the application of the claims to things that are not that particular example or embodiment. All right?

So we'll proceed on that basis. But I need to warn you, Mr. Haynes, you're not permitted to get into a direct comparison that indicates that infringement could be or might be limited to a particular embodiment. Understood?

MR. HAYNES: Understood, Your Honor.

THE COURT: All right.

Q. (BY MR. HAYNES) Doctor Valerdi, what I'm going to do is actually I hope a lot simpler than that. So what I want to do, just as an example, identify what the various elements of this claim look like in the example figure. Okay?

A. Okay.

Q. So we've got, again, this claim language of layer 2 ring network. Right? Do you see that, sir?

A. Yes.

Q. And an example of such a thing is the ring network shown in figure 1 on the right side that we just talked about. Right?

A. Yes.
Q. And then we've got an external layer 3 network. An example of that would be the external network that we talked before out here. Correct?
A. Correct.
Q. And then we talk about in nodes of said ring network, you understand that's referring to the nodes of the layer 2 ring network. Correct?
A. Yes.
Q. And then down here at the bottom, you're defining paths from said nodes and those have to go through egress nodes. Correct?
A. Correct.
Q. And the egress nodes here are the things -- in this example are the connection points between the layer 2 ring and the external network, so these nodes that are connected to the external network. Correct?
A. Correct.
Q. You would not characterize in this example nodes 16 or node 20 -- I believe that's node 18--node 18 or node 20 as egress nodes. Correct?
A. That's correct. I agree.
MR. HAYNES: Okay. If we could bring up ID 2116-01.
Q. (BY MR. HAYNES) Now, you used this slide in your direct testimony to illustrate your opinions on infringement.

Correct?

A. Correct.

Q. And this is a figure out of one of Nokia's documents that shows an example triple play surface delivery architecture. Correct?

A. Correct.

Q. And what you contend is the layer 2 ring network is the network that is comprised of the BSAs here and this BSR here. Correct?

A. Yes.

Q. And what you contend to be the layer 3 network, you've shown in this blue square on the right. Correct?

A. That's right.

Q. And you would agree with me, sir, that these BSA nodes are not connected to the external network. Correct?

A. Yes, I agree.

Q. And you would also agree with me, sir, that these BSA nodes do not have visibility beyond the BSR node. Correct?

A. Correct.

Q. And as a result of that, these BSA nodes cannot define paths that go beyond the BSR. Correct?

A. I'm reflecting on your question because there is a lot of source code running through my mind right now, and there is inter and intra variables, there's shared paths, there's a lot of information moving. So I'm not sure I can answer

definitively the way you've asked it.

Q. Okay. As you sit here today, you cannot tell me that these BSA nodes can define a path through the BSR node out to the external network. Correct?

A. I'm a little unsure on the path designation because there's information coming in from the layer 3 node through the egress to those BSAs that you're asking about.

So I will just qualify my answer to say there is definitely information moving and there are paths. In terms of where that communication stops and ends is really an answer that can be provided by the source code.

Q. We talked about -- well, you've heard testimony at least about these dashed lines that go from the BSA to the BSR.

A. Yes.

Q. Correct?

And you understand that those dashed lines represent layer 2 BPLS connections. Correct?

A. Yes.

Q. Okay. And you also understand that those connections at layer 2, these BPLS connections, start at the BSA and then are terminated at the BSR. Correct?

A. I've seen that kind of language, yes.

Q. Okay. And you also in your direct testimony talked about the concept of OSPF and OSPF routing. Do you recall that generally?

A. Yes.
Q. Now, these BSAs, if they were using OSPF routing, they would only define paths at most from the BSA to the BSR. Correct?
A. In that limited example, yes.
MR. HAYNES: Can we bring up ID 2020-01?
Q. (BY MR. HAYNES) This is another one of the demonstratives you used in your direct testimony. Correct, sir?
A. Yes.
Q. And you used this to show the seven layers of the OSI model that we've heard some testimony about. Correct?
A. Correct.
Q. Now, when we talk about layer 2 ring network, what that means is that the transported data in that ring network is being done at this layer, layer 2. Right?
A. That's correct.
Q. And you would agree with me that when I talk about a ring network in the concept of computer networking, I can have different layers. I can have a ring network at layer 3, for example.
A. Yes, I think you can.
Q. Yeah. I can also have a ring at layer 1, for example.
A. Yeah, I agree with that.
Q. Yeah. And layer 1, as we talked about, is the physical

layer. Correct?
A. That's correct.
Q. And if I'm talking about a physical wireDConnection, the physical layer, you can think of that as actually the wire. Right?
A. That's correct.
Q. If you're talking about wires, you're talking about layer 1. Right?
A. That's correct.
Q. And some of these computer networks, the wires that we use are called fibers. Right?
A. That's one option, correct.
Q. Okay. Now, what I want to do is go to another one of the slides you used.

MR. HAYNES: ID 2117.

Q. (BY MR. HAYNES) Do you recall testifying about this document?
A. Yes.
Q. And I believe the substance of your testimony was that you believed that the figure we just looked at had a layer 2 ring network because this document references a ring topology. Do you recall that testimony generally?
A. Yes, that was one of the reasons I cited.
Q. Right. But you understand that the ring topology that is being described here is the fiber plant layout. Correct?

A. The text that you've underlined which says regardless of the fiber plant layout seems to suggest that the fiber plant layout is one example of that ring network. It doesn't suggest that it's only limited to a fiber plant layout.
Q. Well, let's actually look at the prior sentence. We see there that the examples that are actually being given of a fiber plant layout are a hub-and-spoke or a ring topology. Right?
A. Yes, I see those.
Q. And those in this example, it's talking about an advantage of using VPLS for this application is that VPLS instances can be established over those different fiber plant layouts. Correct?
A. That's fair, yes.
Q. And you agree with me that it is possible to have a fiber layout that is in a ring at layer 1 and a layer 2 network that is not in a ring. Correct?
A. I think that's possible, but that's not what the diagram is showing. So it's inconsistent with the drawing.
Q. That's just not how you interpret this document. Fair?
A. Well, but the -- the interpretation comes from what's written in -- at the center of that ring topology drawing, which says VPLS, and virtual private LAN service is a layer 2 protocol. So it's hard to separate. I mean, they're the same color, they're in the same part of the figure. I can't

separate those two things.
Q. Now, you mentioned VPLS, and you said that's layer 2. Right?
A. Correct.
Q. And you see here where it says, VPLS enables a full mesh to be created between BSA and BSR nodes. Do you see that?
A. Yeah, that's kind of confusing to me. I see it.
Q. And you understand that a full mesh connection is not a ring connection. Correct?
A. I absolutely agree with that, yes.
Q. And you understand that when this document is talking about the connections between the BSAs and the BSR, it describes those VPLS connections, the layer 2 connections, as mesh connections. Right?
A. I struggle with that association because the diagram that is referenced is figure 2, is not a mesh network, so I don't see how the text matches the diagram.
Q. Okay.
MR. HAYNES: Can I bring up DDX 4.2?
Q. (BY MR. HAYNES) Doctor Valerdi, you would agree with me that "a ring network is a local area network in which devices (nodes) are connected in a closed loop, or ring." Correct?
A. Yes.
Q. Okay.
MR. HAYNES: Let's go to the next slide.

Q. (BY MR. HAYNES) And you would agree with me that "A mesh network is a communications network having two or more paths to any node." Correct?
A. Mostly.
Q. You have in front of you your expert report, sir?
A. Yes, I do.
Q. Can you just look at your expert report on page 17, paragraph 44H?
A. Which tab?
Q. It should be in a binder by itself.
A. I see depositions and I see cross binder.
MR. HAYNES: Your Honor, may I approach?
THE COURT: You may.
So are you referring to the expert's opening report?
MR. HAYNES: Yes, Your Honor.
THE WITNESS: I think these are identical.
Q. (BY MR. HAYNES) Probably.
A. Okay.
Q. I only need one page. See if there's a page 17 in there, if you don't mind, sir?
A. Which tab?
Q. Your opening report.
A. Yes.
Q. Okay. If you would just read on page 17 to yourself, paragraph 44H.

A. I've read it.
Q. Does that refresh your recollection that a mesh network is a communications network having two or more paths to any node?
A. Yes.
Q. Okay.
MR. HAYNES: Now, if we could, let's bring up the next demonstrative, DDX 4.4.
Q. (BY MR. HAYNES) Okay. Now, a ring network is a local area network in which devices are connected in a closed loop or ring. That's a definition you agree with. Right?
A. Yes.
Q. But a mesh network is a communication network having two or more paths to any node. Correct?
A. Yes.
Q. Now, it's your interpretation that this red line here is actually a physical connection of some sort. Is that right?
A. Yes.
Q. Okay. You understand that Mr. Valley doesn't agree with you on that?
A. Yes, I do.
Q. Okay. But even if Mr. Valley did agree with you that that was actually a physical connection, even if that was the case, I would still have a connection here and a connection here and a connection here. Correct?

A. Yes.
Q. And that would be a mesh network, wouldn't it, sir, under the definition that you just agreed to?
A. No. There are some paths missing. The top BSA is not directly connected to the BSA that's at the bottom of the oval, and the other missing connection is the bottom BSA is not connected to the BSA on the top right in a direct manner, violating the definition of a mesh network.
Q. That would also not be a closed loop or ring, would it?
A. By nature of the limited arrows or lines that you've drawn, I don't know if you were done or if you wanted to stop there intentionally. You've drawn a hub-and-spoke network.
Q. Fair enough.

Certainly the connections shown in this illustration are not a closed loop or ring. Correct?
A. Can you clarify, are you referring to your drawings or what's originally in the figure?
Q. I'll make it easy and just highlight what everybody in the case -- you contend it's the ring, Mr. Valley contended it's the connections in between --

THE COURT: Let's don't tell him what another witness is going to say. You know, we're going to examine that witness in the future. Let's take them one at a time.
Q. (BY MR. HAYNES) Let me just ask you this question, sir. If the connections between the BSA and the BSR are the ones

that I just drew there, you would agree with me that that is not a ring network. Correct?

A. Just to clarify, only the connections you've drawn; nothing else?

Q. Correct, sir?

A. I would agree that is a hub-and-spoke network.

Q. Okay. Now, I want you to assume for my next question that those connections are still there and that those are layer 2 connections. Are you with me so far?

A. Yes.

Q. Under that assumption, you would agree with me that the connections between the BSA and the BSR would be a layer 2 hub-and-spoke connection. Correct?

A. Yes.

Q. Now, if I add this connection around the outside and I tell you that that red circle is fiber, what I've illustrated here would still be a layer 2 mesh network. Correct?

A. That's one of the networks you've shown, yes.

Q. I've also shown a layer 1 ring network that's connected by fiber. Correct?

A. I partially agree with that.

Q. Okay. You agree with me that a fiber connection is a layer 1 connection. Correct?

A. Yes.

Q. Okay. Now, you understand that the claims for the '599

Patent that we've been talking about require that there be a layer 2 ring network. Correct?

A. Yes.

Q. And you understand that it's certainly possible for Nokia's customers to configure the routers that Nokia sells in networks that are not layer 2 ring networks. Correct?

A. I agree.

Q. And you did not attempt any analysis to determine how many of the routers that Nokia sells have ever been configured in what you contend to be a layer 2 ring network. Correct?

A. Incorrect.

Q. How many of Nokia's routers have been configured into a layer 2 ring network?

A. I can't tell you exactly because I did not do an exhaustive search, but I can tell you from the configuration files that I analyzed, there was a lot of configuration information there. And so that really would be where the -- where I would be able to answer that definitively, through those configuration files.

Q. So, sir, what you've accused of infringement in this case is the particular configuration, this triple play service delivery architecture. Correct?

A. Yes.

Q. And you were here for Mr. Valley's testimony. Correct?

A. Yes.

Q. And you heard Mr. Valley testify that that particular architecture, the triple play architecture, maybe accounts for less than 20 percent of the Nokia routers that are sold?
A. I don't remember exactly the 20 percent, but I remember him answering questions about triple play.
Q. Okay. You have no reason to disagree with Mr. Valley's testimony regarding the extent to which any of Nokia's customers have used the triple play architecture.
A. I have no reason to question his testimony.
Q. Okay. Let's move on to the third patent, the '580 Patent.
MR. HAYNES: If we could bring that up, Mr. Carrillo. It's JX 2.
Q. (BY MR. HAYNES) Doctor Valerdi, you recognize this as the '580 Patent that you believe is infringed by Nokia's router products?
A. Yes.
Q. And you understand that this patent is about resource sharing among network tunnels. Correct?
A. That's correct.
Q. This patent is not about resource sharing among paths of the same tunnel. Correct?
A. I'm thinking about your question because you've distinguished path and tunnels.
Q. Well, let me -- let's put the claims up and maybe that

will help you.

MR. HAYNES: Can we look at claim 8?

Q. (BY MR. HAYNES) Doctor Valerdi, you understand that in order to infringe this claim, there must be resource sharing among first and second tunnels. Correct?

A. Yes.

Q. So there has to be two tunnels that I'm sharing resources between. Correct?

A. Yes.

Q. And you understand that prior to this patent, there were IETF standards that allowed resource sharing between two paths of the same tunnel. Correct?

A. Correct.

Q. And so what the -- this patent was supposed to have added was the notion that I could have two independent tunnels with different end points that could share resources. Correct?

A. Correct.

Q. And you talked a little bit in your direct testimony about a protocol called shared explicit. Do you recall that?

A. Yes.

Q. And that's one of the things that you used to illustrate your testimony that you thought Nokia's products were sharing resources between two different tunnels. Right?

A. That's correct.

Q. But you know, sir, that the shared explicit message,

something that existed long before this patent. Right?
A. Maybe that type of message did, but there's a lot more to that story in terms of its functionality.
Q. Right. And, for example, the patent itself recognizes that there was an IETF standard called 3209 that used shared explicit messages to share resources between two paths of the same tunnel. Correct?
A. That's correct.
Q. And you also know, sir, that before the invention of this patent, there was an IETF standard that was known in the art called 4875. Correct?
A. Yes.
Q. And that IETF RFC 4875 standard is something called point-to-multipoint label switch paths. Right?
A. Correct.
Q. And the standard that told you how to create and define point-to-multipoint label switch paths existed before the '580 Patent was filed. Correct?
A. That's correct.
MR. HAYNES: If we could bring up ID 2308.
Q. (BY MR. HAYNES) And this is one of the examples that you gave from a Nokia document to illustrate your belief that Nokia shares resources between two different tunnels. Correct?
A. Correct.

Q. And what you've accused here is an example of a point-to-multipoint label switch path. Correct?
A. This is one example, yes.
Q. Yes. And you understand that in Nokia's products, the way that they implement point-to-multipoint label switch paths is using RFC 4875. Correct?
A. That's correct.
Q. And you understand that -- well, you were here for Mr. Valley's testimony who explained that a point-to-multipoint label switch path is one tunnel. Correct?
A. I don't remember that specific statement, but I'll go with that.
Q. Yeah. You would agree with that a point-to-multipoint LSP is a tunnel. Right?
A. Yes.
Q. One tunnel. Correct?
A. Correct.
Q. Okay. So what I'm seeing here when I've created this point-to-multipoint LSP, I'm looking at one tunnel. Correct?
A. Well, this particular figure doesn't show one tunnel; it shows two tunnels.
Q. Okay. And it's your belief that the two tunnels are what you've drawn here in green and yellow. Right?
A. Well, to be clear, those arrows that exist in the diagram are Nokia's -- part of Nokia's drawing. All I've done is

added colors to those arrows.
Q. Okay. And you understand that the point-to-multipoint tunnel that is in Nokia's products and that existed before the '580 Patent had different end points. Right?
A. Yes, I do.
Q. Okay. So the notion of having a point-to-multipoint tunnel with different end points is not something that Orckit is claiming to invent or that you've claiming is new to the '580 Patent. Right?
A. That's correct.
Q. Okay. Now, in your infringement analysis when you were trying to determine whether or not Nokia's products infringed the '580 Patent, the thing that you pointed to as having two tunnels was a point-to-multipoint LSP. Correct?
A. As an example, I did.
Q. Yes. And you actually identified it in support of your opinions on infringement the RFC 4875 standard. Correct?
A. I don't think I mentioned that standard during my direct.
MR. HAYNES: If you could bring up -- let's bring up ID 2138-02.
Q. (BY MR. HAYNES) Do you see that, sir?
A. Yeah. I see it in the paper, but I didn't actually say that standard name in my direct.
Q. You actually didn't mention the point-to-multipoint LSP that you're pointing to for infringement was the RFC 4875

standard. Right?
A. I was making a different point on this slide.
Q. But you agree with me that what you're accusing of infringement in Nokia's products is implementing the point-to-multipoint RSVP LSP standard RFC 4875. Correct?
A. I agree that part of it is implemented. Part of the implementation is based on that standard.
Q. And we also looked -- you pointed to some different messages that were sent back and forth, and there was a diagram with a notification going one way and an RESV message going the other. Do you recall that?
A. Correct.
Q. And you understand that the messages that you pointed to are specified by either the RFC 3209 standard or the 4875 standard. Right?
A. I agree that the messages themselves are specified by those documents, but the way the messages are used is quite unique and different.
Q. Is it your testimony that what was new about the '580 Patent was using the technology that was already specified in some new way?
A. I'm not sure if I would describe the RFC as a technology. It's a standard. And the way somebody chooses to implement that standard might -- will differ. So the technology to me is more about the implementation of an idea as opposed to the

standard by itself.
Q. You understand that in computer networks, one company's routers need to interact with another company's routers?
A. Yes.
Q. And that's one of the reasons they use standards so they can interoperate with each other?
A. Yes.
Q. And you're not suggesting to this jury that there's something in Nokia's source code that changes the way they implement the RFC standard such that it can't interoperate. Right?
A. Your question was much broader about interoperability, but our discussion prior was very specific about how a specific type of message is used within products. I think those are two very different things.
Q. And the way -- the messages that you pointed to, what they were being used for was to create a point-to-multipoint LSP using RFC 4875. Correct, sir?
A. Part of the implementation is based on that standard, I agree.
MR. HAYNES: Pass the witness, Your Honor.
THE COURT: All right. Redirect by the Plaintiff? Proceed when you're ready, Mr. Pomeroy.
MR. POMEROY: Thank you, Your Honor.
THE COURT: Make sure we hear you.

MR. POMEROY: Thank you, Your Honor.

Mr. Jarrett, could you please pull up JX 01? Would you go to claim 1 for me? It's at the back. Stop there, and could you blow up claim 1 for me?

REDIRECT EXAMINATION

BY MR. POMEROY:

Q. While that's being taken care of, I want to ask you a few questions, Doctor Valerdi.

In your direct examination, you presented a lot of evidence. Was some of that evidence source code?

A. Yes, I relied on source code.

Q. How much source code did you review?

A. Millions of files which translate to probably billions of lines of code.

Q. And did you present source code in your analysis today?

A. Yes.

Q. Did you present a lot of source code today?

A. No.

Q. And why is that?

A. Well, because of the sheer volume of it, it's more efficient to just grab excerpts that relate to the accused patents and the accused claims, so I did the prefiltering in advance.

Q. Now, is it -- was every aspect of your infringement analysis across all three patents dependent upon the source

code you analyzed?

MR. HAYNES: Objection; leading.

THE COURT: Restate the question, counsel.

Q. (BY MR. POMEROY) You depended on -- why did you analyze the source code?

A. Because it shows how the product is actually programmed to work. It's -- that's the nice thing about source code. It either shows that it does something or it doesn't do something. So it's very -- it's the ground truth.

Q. Do you recall when Mr. Valley said he hasn't seen any of the source code?

A. Yes, I remember him saying that.

Q. And do you recall Mr. Haynes showing you a bunch of figures?

A. Yes, he showed me figures.

Q. Did Mr. Haynes show you a single line of source code?

A. No.

Q. Did Mr. Haynes ask you a single question about your source code analysis?

A. I don't believe he directly asked me about source code.

Q. Now, I want to first turn to the '010 Patent.

Now, has this term 'hub' been construed by the Court?

A. No.

Q. Now, the term 'hub' is not, if you look at the claim, just in isolation. Is that correct?

A. Correct.
Q. Are there other limitations that are required to meet the hub limitation?
A. Yes. All the words that are after hub.
Q. Does the hub need a plurality of ports?
A. Yes.
Q. Does the hub need to be able to be configured to receive and transmit data frames?
A. Yes.
Q. Does the hub need to be able to receive and transmit those data frames in accordance with a packet-oriented layer 2 protocol?
A. Yes.
Q. Now, you were shown a definition of a hub. Did that -- seeing that definition change any of your analysis here today?
A. No.
Q. And why is that?
A. Because the distinction was being made between what a device that is only a hub is defined as, whereas the point I was trying to make was different, is that a router is also acting as a hub.
Q. Did the '599 Patent itself -- excuse me.
Did the '010 Patent itself provide context to your understanding of what a hub is?

A. Yes.

MR. HAYNES: Objection, leading.

THE COURT: I'll allow the question, but you need to refrain from leading, counsel.

MR. POMEROY: Mr. Jarrett, could you please turn to JX 2, please? My apologies. JX 3. Could you go to the claim 59, please?

Q. (BY MR. POMEROY) Now, my first question is, what does that first limitation require?

A. A lot of things. Layer 2 and layer 3 networks, to begin with.

Q. Are the first four words 'a computer software product'?

A. Yes.

Q. What is a computer software product?

A. It's a device that has memory, a processor, and software that runs inside of those hardware components.

Q. Is there any hardware component within that first portion of the first limitation?

A. Yes. A computer readable medium.

Q. Understood.

I want to talk about this layer 2 ring network.

MR. POMEROY: Mr. Jarrett, could you please go to the direct deck and slide 97? Could you go one slide further, please? Thank you.

Q. (BY MR. POMEROY) Do you recall being shown this today?

A. Yes.
Q. Do you recall questions being asked regarding a ring network and layer 1?
A. Yes.
Q. If a ring network is at layer 1, is layer 2 also a ring network?
A. Yes, it can be.
Q. And why is that?
A. Because if you remember from the seven layers of the protocol stack, one of them is the network layer, one of them is a data layer, and the other one is the physical layer. So it's possible to have networks that can be described in more than one of those layers.

MR. POMEROY: Your Honor, at this time I'd like to seal the courtroom.

THE COURT: All right. Based on counsel's request and to protect confidential information, I'll order the courtroom sealed.

I'll direct all persons present who are not subject to the protective order in this case exit the courtroom and remain outside until it's reopened and unsealed.

(Courtroom sealed.)

(Courtroom unsealed.)

MR. POMEROY: Mr. Jarrett, during that, could you make the call admission control larger for me, just the last limitation of that claim 8?

THE COURT: All right. The courtroom is unsealed. Let's continue.

Q. (BY MR. POMEROY) Doctor Valerdi, do you recall being asked questions about an RFC 4875?

A. Yes.

Q. And I was taking notes and I remember you saying something about what you -- your infringement analysis was not based solely on RFC 4875.

MR. HAYNES: Objection; leading.

THE COURT: Restate your question, counsel, in a non-leading form.

Q. (BY MR. POMEROY) Was your infringement analysis based on RFC 4875?
A. No.
Q. What was your infringement analysis based upon?
A. The source code, the technical manuals that Nokia provided of their products, my review of depositions of Nokia employees, and the configuration files of Nokia's routers.
Q. Do you recall that the claim term 'call admission control'?
A. Yes.
Q. Do you recall the identical SGI values that are required by the claim construction call admission control?
A. Yes.
Q. Did Mr. Haynes ask you anything about a call admission control with respect to RFC 4875?
A. I don't think so.
Q. For this claim term, did you point to anything other than source code?
A. I don't think so. I think the majority of my analysis for this claim term was based on source code.
MR. POMEROY: Your Honor, I pass the witness.
THE COURT: All right. Is there additional cross examination?
MR. HAYNES: Briefly, Your Honor.
THE COURT: We'll see.

MR. HAYNES: I'll do my very best.

THE COURT: Let's proceed.

RECROSS EXAMINATION

BY MR. HAYNES:

Q. Doctor Valerdi, I think I just heard you testify that you reviewed billions of lines of source code, and if you were to print them out they would have filled this whole courtroom. Is that right?

A. They would fill a large part of the courtroom. I don't know if it would fill the whole thing, but it would be very noticeable.

Q. Okay. And in the boxes over there, that's really the code that was printed that you sort of focused on. Right?

A. That's correct.

Q. Your review of all the other code that Nokia made available to you happened on one day between 9:00 a.m. and 5:00 p.m. Right?

A. No.

Q. How many times did you review Nokia source code in connection with this case, Doctor Valerdi?

A. I probably spent hundreds of hours reviewing source code.

Q. Doctor Valerdi, I'm asking not about the code you printed in the box, but about your review of the source code computer where the totality of the source code relevant to this case was made available to you.

Your review of that computer, sir, was one day. Right?
A. My trip to Atlanta to your offices where the source code computer was provided was one business day, at which point I identified specific files and excerpts of those files that I wanted to be printed for further review. And so that was in I think October of 2023. We're already in April. So between my visit in October to the time that I submitted my expert report, which is probably in December, I spent a lot of time looking at source code. And I already knew what I needed to focus on, so it wasn't just a random search; it was a focused analysis.
Q. I think I heard you testify in response to questions from your counsel that you did not base your infringement opinions on the RFC 4875 standard. Is that right?
A. That's correct.
Q. Sir, I'd ask you to look at your expert report you have in front of you in appendix B-1.
And, sir, you understand that in connection with your work in this case, you prepared a written report in advance of coming here that summarized your opinions on infringement. Correct?
A. Yes. I haven't found where you wanted me to look.
Q. I'll direct you in just a minute.
The report you have in front of you is that summary of your written analysis that set forth your infringement

opinions in this case. Correct?
A. Correct.
Q. Is it your testimony that in that report you did not rely on RFC 4875 to support your opinions of infringement?
A. I think the way I understood the question was whether the RFC standard was the only thing I relied on.
Q. If that's the way you understood it, I apologize. Let me rephrase it.
You may have relied on other stuff, but you absolutely relied on the RFC 4875 standard to support your opinions on infringement. Correct?
A. I'd have to look at my report again. It's been several months, so if you want to point me to a specific paragraph, I'm happy to look at it.
Q. So as you sit here today, your testimony is you don't know whether you relied on that standard or not?
A. Not quite. My testimony is I remember looking at that standard. It's an important reference, but the actual infringement analysis is not supported only by a standard; it's really about what the code in those boxes do and what the manuals that Nokia provides do. That's really what's relevant to me for infringement.
Q. Right. But Nokia's products implement that standard. You understand that. Correct?
A. Yes, I do.

Q. You understand Nokia's documents explicitly state that they're implementing that standard. Right?
A. That's fair, yes.
Q. Okay. Switch gears. And this is a little out of context. I apologize.
We talked about OSPF routing protocol. Do you recall that?
A. Yes.
Q. That OSPF routing protocol is a layer 3 protocol. Correct?
A. That's right.
Q. OSPF routing protocol is not a layer 2 routing protocol. Correct?
A. I'm unsure. I'll have to look at my report again. But if you're representing that, I'll play along.
Q. I'm just asking for your opinion, sir. If you don't know, it's fine for you to say you don't know.
Do you know as you sit here today whether OSPF is a layer 2 routing protocol?
A. I don't remember that detail specifically.
Q. I just have a couple of more questions, but it is about the source code slide that you were asked about.
Could we seal the courtroom, please, Your Honor?
THE COURT: All right. Based on counsel's request, I'll order the courtroom sealed. I'll direct that all persons

present who are not subject to the protective order in this case exit the courtroom and remain outside until it's reopened and unsealed.

(Courtroom sealed.)

(Courtroom unsealed.)

THE COURT: And with that you may step down, Doctor Valerdi.

Am I correct, Mr. Bennett, your next witness is another deposition witness?

MR. BENNETT: That's correct, Your Honor.

THE COURT: All right.

MR. BENNETT: We call Phillipe Bergeon, who was the product line manager of IP networks for Nokia. Total run time is 6 minutes, 32 seconds, with 4 minutes, 37 seconds attributed to Plaintiff and 1 minute, 55 seconds attributed to Defendant.

THE COURT: All right. Proceed with this witness by deposition, please.

PHILIPPE BERGEON

BY VIDEO DEPOSITION

Q. Can you briefly describe when you first started working for Alcatel Lucent?

A. Yes. So I actually started to work for Alcatel, that then get merged into a -- with Lucent. I came -- I became Lucent and then I became Nokia.

Q. Can you explain to the jury what IP products are?

A. Yes. So IP products -- IP routers, when we say IP product, it's the IP division within Nokia. And so those products are the IP router that Nokia sells to service

providers around the world, so AT&T. Yeah, the highest-end type of operator which you can find in North America and elsewhere.

And so -- so I start on that product line. There is -- there is various different products depending on where that router is positioned within the operator network, whether it's in the core network or the edge network. We have smaller router and larger router.

Q. And these IP routers, are you aware if Nokia refers to these as service routers?

A. Yes.

Q. Have you ever reviewed any of the source code that runs on the Nokia IP routers?

A. No. Like, actually, product managers do not have access to the source code.

Q. I guess, how would one obtain how the router is configured?

A. Well, the only people who knows how the router is configured is the customer. And the customer knows how the router is configured.

Q. And Nokia doesn't know how the customer configures its router?

A. No. We build features, we build features, and the customer can use any of the features that we -- any or none of the features that we provide.

Q. I'm just trying to, I guess, understand how each of these 70- -- 7000 series routers differs from each other. Like, what is the difference for each subset of the series of routers?
A. Okay. So the 7210 is much smaller, so it's a much smaller system, and it's used for much -- like, mostly more at the edge of the network. So when you don't need -- it's a capacity. Right? Okay. Let me -- the bigger the router, the more capacity there is to -- to switch traffic. So the smaller routers have smaller capacity. So that's -- the 7210 is basically the smallest capacity in terms of how much traffic it can forward and receive. So -- so it also ends up being the smallest system.
Q. And what is the -- the 7250 series routers?
A. So the 7250 is part of this main SR-s family.
Q. Is it --
A. Prior to --
Q. Is it similar to the 7210 series, or is it different in any substantial way?
A. So it is -- the 7250 is closer to the -- well, it's -- it's an edge system, so it has -- it has less capacity than the main 7750. So that's -- the biggest difference between the 7250 and the 7750 is the network processor that is on the 7250. So the network processor, we use Nokia network processor or merchant silicon. So 7250 uses the merchant

silicon. That would be the biggest difference.
Q. And what is the difference between the 7450 series of routers versus the 7250 series of routers?
A. So it would be whether we use the merchant silicon or the Nokia silicon.
Q. Does the source code implemented in the router control how a given IP packet is sent across a network?
A. So -- so the source code -- is the source code -- like, the source code -- the source code defines all of the protocol and features that we support. Depending which feature is enabled by the customer, cause by default nothing is enabled, then -- then something specific happens for the particular packet.
Q. Well, I guess before providing its routers to customers, whether through sales or other means, does Nokia test the functionalities provided on those routers?
A. So Nokia engineering team develop and test features, in general.
Q. And do you know why this document was created?
A. This is a configuration guide, so -- so we have with the user guide for the features that we have.
Q. Okay. So this is for a customer? This is presented to a customer?
A. So -- so eventually, yes, our user guide are available to download and -- on our support website. The customer can

download that, the guide.

Q. And I think it was stated earlier that the features are -- are the features kept based off customer demands?

A. The features are developed based on customer-end demand. They're not removed based on the customer demand.

THE COURT: Does that complete this witness by deposition?

MR. BENNETT: Yes, it does, Your Honor.

THE COURT: All right. Mr. Bennett, you and Mr. Haynes approach the bench for a moment, please.

MR. BENNETT: Yes, Your Honor.

(The following was had outside the hearing of the jury.)

THE COURT: My intention is to proceed with Doctor Cole, but probably get a portion of his direct on the record this afternoon and then finish up with him tomorrow. I assume you have Mr. Dell as your final witness.

MR. BENNETT: That's right, Your Honor.

THE COURT: Do you know how long you expect him to be on?

MR. BENNETT: So we have a couple of short depos or -- I don't know how short they are, but we have a couple of video depos before Mr. Dell and then Mr. Dell, but we will -- we anticipate resting tomorrow.

THE COURT: I understand that. Is Mr. Dell going to

be on the stand an hour or five hours or something in between?

MR. BENNETT: Roughly an hour; a little more than an hour.

THE COURT: Okay. I'm trying to determine how late to go.

MR. BENNETT: Okay.

THE COURT: And I'm not going to put you both on the spot and ask whether you're going to use every minute of your designated time or give some back, but I want to try to get as much time off today as we can.

All right. We'll start with Doctor Cole, but I don't expect to finish his direct before we break for the day.

MR. BENNETT: Understood.

THE COURT: Okay. Thank you, gentlemen.

MR. DACUS: Thank you, Your Honor.

(The following was had in the presence and hearing of the jury.)

THE COURT: Plaintiff, call your next witness, please.

MR. BENNETT: Your Honor, Smart Path calls Dr. Eric Cole.

THE COURT: All right. Doctor Cole, if you'll come forward and be sworn by our Courtroom Deputy, please.

(Whereupon, the oath was administered by the Clerk.)

THE COURT: Please come around, have a seat on the

witness stand, sir.

Are there binders to distribute, counsel? If there are, let's do that now.

Do you have one for the Court?

MR. BENNETT: Oh, yeah. Sorry. Apologies.

THE COURT: All right. Mr. Liddle, you may proceed with direct examination.

MR. LIDDLE: Thank you, Your Honor.

DR. ERIC COLE, PH.D.,

having been first duly sworn, testified under oath as follows:

DIRECT EXAMINATION

BY MR. LIDDLE:

Q. Good afternoon, Doctor Cole.

A. Good afternoon.

Q. Can you please introduce yourself to the jury?

A. I'm Eric Cole. I am from Ashburn, Virginia, which is just outside of Washington, D.C. I specialize in networking, cybersecurity, and computers. And I have three wonderful Children. Jack is 24, Anra is 21, and Abby is 18.

Q. Doctor Cole, where are you from?

A. Originally from New York, so you might hear a little bit of a New York accent, but I've been in Virginia for 30 years because I relocated after college to work for the government.

Q. And can you please describe your educational background?

A. I have a Bachelor's and Master's degree in computer

science with a minor in business, and I have my doctorate in cybersecurity from Pace University.

Q. Okay. And can you describe a few things on this slide, like what is this 'hall of fame' line here?

A. I've been working in technology, networking, and cybersecurity for 30 years, and I've done a lot of work both in the United States and internationally, and there's the European Infosec organization that's the largest organization in the world, and once a year based on nomination they pick somebody to be nominated into the hall of fame, and six years ago I received that honor.

Q. And Doctor Cole, what is this CSIS?

A. So for the last four presidents I've been asked at various times to brief the white house and provide information on policy to protect the United States. For the 44th president, there was actually a commission that was created and I was one of the commissioners that worked for eight months on putting together a report and a strategy to help protect the United States from cyber attacks.

THE COURT: Doctor Cole, would you slow down, please? Speak a little slower, please, sir.

THE WITNESS: Yes, Your Honor.

THE COURT: Thank you very much.

Let's continue.

Q. (BY MR. LIDDLE) Doctor Cole, can you please describe

your employment history?
A. I started off working at the CIA, the Central Intelligence Agency in Langley, Virginia, and I spent approximately six years a professional hacker, understanding how to exploit and break into various systems. And my specialty is on exploiting vulnerabilities and securing nuclear reactors.
Q. Okay. And where else did you work?
A. I also worked at a company called TSGI. It was one of the companies I founded. And we were acquired by Lockheed Martin. And normally when a company is acquired the executives take the payout, but because of the importance of networking, technology, and cyber, I was asked by the president to stay on as a senior fellow. And I was the technical representative for all acquisitions, so whenever we were going to acquire new technology, license intellectual property, I was the technical representative to apportion and determine what the value of that technology was so we can know what to pay or what a fair value was to license our own technology to third parties.
Q. And Doctor Cole, do you do any consulting work?
A. Yes, I also -- after Lockheed I worked at McAfee and played a similar role where I identified gaps in their technology and provided technical apportionment to acquire new licenses.

After McAfee was acquired by Intel, for the last 10 years I've been running my own company, Secure Anchor Consulting, where I perform expert witness services. I also sit and advise a board of directors on technology, and I also help our companies acquire and license new technology.

Q. Okay. And Doctor Cole, have you won any awards or got any certifications in this field?

A. Yes, I hold a few certifications. One of those is CISSP, which stands for Certified Information Systems Security Professional. I've had that certification in the mid '90s. There's also a series of certifications in technology called GIAC, which is Global Information Assurance Center. I actually don't hold those certifications because I developed and created the exams, so it would be a conflict of interest for me to take my own exam.

Q. And Doctor Cole, do you do anything in your community in the scope of your expertise?

A. Yes. I'm very big in getting individuals into technology. Also, because I have two daughters, a special place in my heart is to help get women into technology and cybersecurity, so I advise many of the local high schools. For example, Riverside High School near me, I sponsor both financially and with time their cyber defense team.

I also sponsor Purdue's cyber defense team. I've been doing that for seven years. And it's sort of a special

privilege because this year my daughter is a freshman at Purdue, so I get to work with her. I don't think she's thrilled that I'm an advisor, but that's still great.

And I also am one of the representatives for United States Air Force. I help build out their cyber defense program. I was one of the few civilians to be awarded cyber air wings. And I also voluntarily, without pay, advised their cyber defense team.

THE COURT: I'm going to ask you again, Doctor Cole, please slow down. It's been a long day, we've heard a lot of testimony, and it's important for the jury to grasp and understand what you're saying, and it will help if you'll slow down the speed of your speech. Okay?

THE WITNESS: Yes, Your Honor.

THE COURT: Thank you.

Let's continue.

Q. (BY MR. LIDDLE) Now, Doctor Cole, in your consulting experience have you ever been retained by companies?

A. Yes. I work with a wide range of companies, many of the Fortune 500 companies. This is just a small selection. I've worked with Xerox, Microsoft, PBS, Gartner, John Deere, just as a representative sample of the companies that I work with.

I typically on my consulting role work with 15 to 20 national and international organizations a year on helping them build out and develop their technology portfolio, help

them license their own intellectual property, and then find gaps in their technology and find new technology they should license.

Q. And finally, Doctor Cole, have you authored any publications?

A. Yes. I've written seven books. One of my top selling books is the *Network Security Bible*. That's one of the books that are used in many colleges around the world that teach core networking principles and cybersecurity. My most recent book is focused more on helping organizations and the general public on securing their infrastructure. That was *Cyber Crisis*. And that was a great honor and privilege because after seven books I finally had a *Wall Street Journal* best seller.

MR. LIDDLE: Your Honor, at this time I'd like to tender Dr. Eric Cole as an expert in the field of computer networking and patent technical valuation.

THE COURT: Is there objection?

MR. FRIST: No objection.

THE COURT: Without objection, the Court will recognize this witness as an expert in those designated fields.

MR. LIDDLE: Thank you, Your Honor.

THE COURT: Let's continue, counsel.

Q. (BY MR. LIDDLE) All right. Doctor Cole, what was your

assignment in this case?
A. My assignment in this case was to analyze the technology related to the '580, the '599, and the '010 Patent; to understand the value that those patents contributed to Nokia's products; and then in working with other experts like Doctor Valerdi, come up with an actual number or percent of value that each of those three patents provide to Nokia's products.
Q. Doctor Cole, have you performed this type of task before in other cases?
A. Yes, I've performed this expert role of doing technical apportionment in over eight other legal cases, many which I testified at trial. And as I mentioned earlier, I also performed this for the last 18 years at Lockheed Martin, McAfee, and many of our Fortune 500 clients.
Q. Doctor Cole, in forming your opinions in this case, what type of evidence did you rely on?
A. As we talked about, there were a lot of private sensitive documents that were presented by both sides, so I looked at over 10,000 pages of documents. Those are all listed in the appendix of my report. I also based it on my knowledge and expertise of having performed this for over 15 years for many companies. I also worked closely with Doctor Valerdi on understanding his opinions on infringement. And I also looked at deposition transcripts and other documents.
Q. Now, Doctor Cole, I don't want to embarrass you, but do

you remember being deposed in this case?
A. Yes, I do.
Q. Okay. Do you remember being asked if you'd spoken to Doctor Valerdi in that deposition?
A. Yes, I do.
Q. And when you answered that the first time, what did you say?
A. I believe the first time it was the beginning of the deposition and I didn't remember correctly, and I think I said something that I don't remember or I don't believe that I did. And I was just a little confused because I was working on many cases at the same time.
Q. Okay. But you, in fact, worked with Doctor Valerdi in this case. Right?
A. Yes, I did. And as we got later in the deposition and we started getting into the evidence, I remembered that all the infringement analysis was based on Doctor Valerdi, and I actually corrected myself later in the deposition.
Q. And have you known Doctor Valerdi for several years?
A. Yes. I have actually worked with Doctor Valerdi on other cases. I believe it goes back probably five years, so we've worked on many cases together, including this one.
Q. Okay. And did you provide your own infringement opinion in this case?
A. No, I did not. I was not asked to do any infringement

analysis for that. I relied on Doctor Valerdi.
Q. And do you agree with Doctor Valerdi's opinion on infringement?
A. Yes, I do.
Q. Okay. Let's talk about the accused products of this case.
What documentation for Nokia's products did you look at?
A. I looked at Nokia's product specification sheets. I believe you've seen several of those over the course of the last two days. These are Nokia's own documents where they specify the features, their products, and what they represent to their customers.
Q. And what do you mean by 'features'?
A. So all of these routers have core features or software functionality that they provide. So they have a list of the core features, and these features is what Nokia decided is important. It's what Nokia actually put on their documents and it's what Nokia advertises and pushes to all their customers.
Q. Now, Doctor Valerdi--I mean Doctor Cole--are you going to be telling the jury about each and every Nokia infringing product?
A. My apportionment is based on all of the products, but we're going to use just the 7250 as a representative sample.
Q. And why did you choose the 7250 as a representative

product?
A. For several reasons. One, this was one of the products that their engineers talked about and referenced in their deposition. It's also one of their primary core products that they represent to customers and sell a lot of. So I felt that it was a good representative sample of their overall product line.
Q. Doctor Cole, we've heard a lot about Orckit-Corrigent in this case. Did you research Orckit in your analysis?
MR. FRIST: Your Honor, I'm going to object to this slide as leading.
THE COURT: Overruled.
THE WITNESS: Yes, I did.
Q. (BY MR. LIDDLE) And what did you find when you researched Orckit-Corrigent?
A. I found that in the 1990 period they were one of the pioneers in this space. They helped develop a lot of the core technology, a lot of the core standards, and their patents represented a lot of innovation during the 1990s.
Q. And on the third bullet point, what is meant by the IEEE standard?
A. The IEEE stands for the Institute of Electrical and Engineers, and it is one of the leading providers in this space, so they'll get together, thought leaders that will go in and create standards so different products from different

vendors can interoperate.

Q. And have you heard of the IETF standards?

A. Yes. The IETF is the Internet Engineering Task Force. This is the group that regulates all of the standards for the internet, such as internet protocol and many of the other protocols that the backbone of the internet uses.

Q. And what did you conclude about Orckit's involvement in these standards?

A. That Orckit was actively involved in these standards. This is an example of one of the IETF standards, and you can see that two of the employees from Orckit are the lead authors of the standard. So Orckit not only pioneered but they also contributed and gave back to the community by creating and writing these standards.

Q. Okay. Doctor Cole, let's talk about your analysis in this case.

What do these numbers represent?

A. These numbers represent my final apportionment. So we wanted to put these up front. But over the next several minutes I'm going to go through the detailed analysis that I performed to show you how I came up with these numbers. But after my detailed analysis, I can concluded that for the '580 Patent, it -- the patents-in-suit contribute 5.48--sorry--for Nokia's products, the '580 Patent contributes 5.48 percent to Nokia's products; for the '599 Patent, it contributes 5.48

percent to Nokia's products; and for the '010 Patent, the technical value added is 4.58 percent for Nokia's products.

Q. And Doctor Cole, would you consider this -- these numbers to be improvement numbers?

A. Yes, these are improvement or value added that the patents add to Nokia's products.

Q. Okay. And in order to quantify this improvement, what Nokia infringing products did you look at?

A. I looked at the six product lines that were referenced several times about the last few days, so I essentially looked at all of Nokia's infringing products. I recently realized that the features are the same across all those products, so I used the 7250 router as a baseline for my analysis.

Q. And so what documents did you look at for your analysis?

A. I looked at all of Nokia's documentation that they presented in this case, I looked at Nokia's products tech sheets where they go in and list all of the different features, and I also looked at the deposition transcripts, and just before I came on you heard one of the deposition transcripts where Nokia's own engineers says the features are the same across all the products; the difference in the products are capacity and CPU, it's not the features.

Q. Okay. Can you explain what's going on here on the right-hand side of this slide?

A. On the right-hand side is where I'm starting to show you

the general process that I use for technical apportionment. So as you heard from Doctor Valerdi, the smallest saleable unit is the actual router. So we start in the top with the Nokia 7250, which is a hundred percent, that's the totality of functionality, and based on Nokia's own documentation, the first way they break up their routers is into hardware and software, which you see on the left-hand side. So the first step in my technical apportionment is I take the router and I break it down into a hardware percent and a software percent.

Q. Doctor Cole, why is it broken down into 75 percent hardware and 25 percent software?

A. The reason for that is hardware, such as a CPU, silicon, cards, and chips, have a hard cost of manufacturing. You actually have to produce those physical components and put them together into the box. Even though the software contributes significant value, because the software can be replicated at lower cost I used a very conservative value of 25 percent for the software and 75 percent for the hardware.

Q. Doctor Cole, let's talk about the software features. How many are there?

A. There are nine software features across all of Nokia's products.

Q. Doctor Cole, does this slide represent some of the software features in this case?

A. Yes. Because each of the features have a lot of

components, I had to spread it across three slides. If you look at the three slides, if you look at the bold, such as network protocols or services, those are the core features. And if we go across, there's actually nine of those core features that Nokia has identified in their own product specification.

Q. Now, Doctor Cole, please explain what process we are going to undertake to place a value on the Smart Path patents.

A. So I'm going to use a four-step process where we take the product or the routers as a totality of a hundred percent, and we technically apportion it down to a specific number. And I -- just want to remind you, this is the same process that I've used at Lockheed Martin, that I used at McAfee, and I've used with our various clients over the last 15 years.

Q. Okay. So please tell the jury what the first step in the process is.

A. The first step is we take the smallest saleable unit, which is a router, and that router represents a hundred percent of the overall product.

Q. Okay. And what is the next step?

A. The next step is we start to break it down into its core components. And based on Nokia's own documentation, the first way they break up their product is at the hardware and software, and all of the infringing components are in the software, so then we take the software features as 25 percent.

Q. And then what is the next step, Doctor Cole?
A. The next step is, for each of the features I then worked with Doctor Valerdi to determine which components of each feature infringe. And the reason why you see an X is because the infringing features are different for each of the products--sorry--for each of the patents. So as we go through each patent, that number is going to be slightly different because there's different features for different patents.
Q. So let's talk about those infringing features. What are the infringing features for the '580 and '599 Patents?
A. Out of the nine total features, working with Doctor Valerdi, there were four infringing features for '580 and '599, and that is network protocols, quality of service traffic management, platform, and services.
Q. And then, Doctor Cole, what are the infringing features for the '010 Patent?
A. For the '010 Patent it was three of the nine features, and those three features are network protocols, quality of service and traffic management, and platform.
Q. Now, there's a next step in the analysis. Is there a next step in the analysis, Doctor Cole?
A. Yes, there is.
Q. Okay. And what is that?
A. So as you saw in those earlier slides, each feature has a series of components associated with that feature, so once I

determined by working with Doctor Valerdi that a feature infringed, I then had to go in and determine which components of each feature infringed the patents. And, once again, because those are different per patent, that's why you see an X there. And as we go into each patent, I can give you the specific numbers.

Q. Very good.

Doctor Cole, what is the first patent we're going to start with to do this analysis?

A. The first patent we're going to start with is the '580 Patent.

Q. Now, Doctor Cole, how do you know the '580 Patent is infringed by Nokia?

A. The way I know that the '580 Patent infringes is because of talking with Doctor Valerdi, looking at his report, and sitting in on his testimony this morning.

Q. And Doctor Cole, just to review, does this slide represent the Nokia accused products that infringe the '580 Patent?

A. Yes, it does. It represents the six families, and the features are the same across all of these products.

Q. Doctor Cole, what are the benefits of the '580 Patent?

A. The benefits are these routers are the backbone of the internet. So there's large amounts of traffic going across, so it allows for resources to be shared. So you can actually

have a very high level of service, because as you can imagine, if you're either watching video, making phone calls, or surfing the web, if there's any sort of delays, that's not going to be acceptable, so this allows an administrator to be able to set up various resources, share them to be able to optimize traffic and optimize performance across the backbone of the internet.

Q. All right. Doctor Cole, let's go through the analysis of the '580 Patent.

So, again, what is the first step of your apportionment?

A. The first step is to take the actual router and break it down into hardware and software, and this percent is the same for all three patents where 75 is given to hardware and 25 is given to software.

Q. And then remind the jury, Doctor Cole, what is the second step in your apportionment analysis?

A. The second step is to take the nine features and determine which of those nine features infringe. And in this case for the '580 Patent, it is services, network protocols, platform, and quality of service and traffic management. And because these are all represented equally in Nokia's documentation, I assigned each of these features an equal 11.11 percent.

Q. Doctor Cole, what is the third step in your apportionment analysis?

A. The third step is to take each of the features, look at the individual components, and determine which components of that feature infringe.

So if we start with services, in this case you can see that there are nine components to that feature, and three of those nine components infringe. And then we would take those three and that would be 33.33 percent, which is three of nine, so then we assign the infringing components of services to be 33.33 percent.

Q. Okay. And are we going to do this for each of the four infringing features here?

A. Yes. Each of the four infringing features have different components, but this general process of picking the components and doing the math is going to be similar for each of those four.

Q. So what is the next infringing feature?

A. The next infringing feature is network protocols. This also has nine components. There is also three of the nine infringe, so that gives us a value of 33.33 percent for infringing components for network protocols.

Q. And Doctor Cole, we're going the flip through here to platform. Is it the same process?

A. Same general process. In this case there is eight components, and five of the eight components infringe, so that would give us 62.5 percent of infringing components for

platform.
Q. Okay. And I want to point something out here. So the number 8 on the platform, do you see that?
A. Yes, I do.
Q. And what is that?
A. That's accounting records.
Q. And is that a software feature?
A. No, that's not. So really that shouldn't be counted, but I wanted to be very fair to Nokia and be very conservative, so because they listed it I still counted it, even though it technically wasn't a software feature.
Q. Okay. Doctor Cole, let's go to the last infringing feature for the '580 Patent. What is this?
A. So this is quality of service and traffic management. There are seven features--sorry--seven components for this feature, and five of those seven components infringe. So if we do the math, five out of seven is 71.43 percent of infringing components for quality of service and traffic management.
Q. Okay. And so let's try to -- let's try to -- let me go back one.
So now we have -- what do we have here? What's the summary of this?
A. So the summary is we have the four features and then we have the percent of components for each feature. So now I

need to go in and take each feature and multiply it by a component and add all four of those numbers together.

Q. Okay. And you prepared some slides here that show this in animation form.

A. That is correct.

Q. Okay. So can you please describe the math as it's popping up?

A. So as I said, each of the features are represented equally by Nokia, so each one of those are one of nine or 11.11 percent, so I have to take services, which is 11.11 percent, multiply it by the infringing component, 33.33 percent, and arrive at 3.6 percent. I then add that to network protocols times its infringing component, which is 3.6 percent, add that to platform, 11.11 percent with its infringing component 62.5 to get 6.9 percent, and then add that to quality of service, multiplying that by its infringing component to get 7.8 percent. And when I add up those four values, it equals 21.9 percent.

Q. Doctor Cole, what's the next step in your apportionment analysis?

A. The next step is, if you remember, these features are under software, and software's only 25 percent, so I then have to take that number 21.9 percent, multiply it by 25 percent for software, to arrive at a final value of the infringing technology at 5.48 percent.

Q. So, Doctor Cole, what is your conclusion on the value of the '580 Patent with respect to Nokia?

A. My opinion is the final infringing value of the '580 Patent is 5.48 percent.

THE COURT: Let me interrupt at this point.

Ladies and gentlemen, I expect this direct examination to go on for some time, and we're about 20 minutes until 6:00. This is as good a place as any to break for the day, so we're going to do that. We'll take up the direct examination of Doctor Cole tomorrow morning anDContinue it then.

As you leave the jury room--the courtroom, rather--in a few minutes, take your juror notebooks with you, please, and leave them on the table in the jury room. Please remember to follow all my instructions about your conduct as jurors, including, as you might expect me to remind you, not to discuss the case with anyone in any way, including the eight of yourselves.

Let me commend you for being prompt this morning. We were able to get a good start at 8:30, and I'm going to ask that we do the same thing tomorrow. So please check the weather and make your arrangements so that you can be here ready to start at 8:30 in the morning.

Have a good evening, ladies and gentlemen. With that, you're excused until tomorrow morning.

(Whereupon, the jury left the courtroom.)

THE COURT: Doctor Cole, you can step down.

THE WITNESS: Thank you, Your Honor.

THE COURT: When you come back in the morning, speak just like you were. You slowed down well.

THE WITNESS: I won't have my morning coffee so I won't be caffeinated.

THE COURT: All right. Please be seated.

Counsel, for your information, we've used a total of 7 hours, 36 minutes, and 11 seconds of designated trial time today. As of right now, the Plaintiff has remaining 5 hours, 36 minutes, and 52 seconds of trial time; Defendant has 4 hours, 5 -- excuse me. That's not the right number. The Defendant has remaining 7 hours and 55 minutes of designated trial time, and the Plaintiff has 6 hours and 24 minutes of remaining trial time. I read the wrong column. Plaintiff has 6 hours and 24 minutes remaining; Defendant has 7 hours and 55 minutes remaining.

Also I've reviewed the previously submitted proposal from the parties regarding the final jury instructions and the verdict form. I'm persuaded that a renewed effort in that regard will benefit the Court. Consequently, I'm ordering the parties to meet anDConfer and to jointly work together and submit a jointly proposed and a newly jointly proposed final jury instruction and verdict form by 6:00 p.m. tomorrow. That should be delivered to court by email transferring those

documents in Word format to my staff. You can send them to Mr. Tatum's email address and he'll disseminate them in chambers for me. But I think the Court will benefit from a renewed effort in that regard. Clearly there are some things that have been dropped and narrowed, and there is greater clarity now than there was when the earlier submissions in this regard were submitted. So please send those to us by 6:00 p.m. tomorrow in Word format.

We'll begin again tomorrow at 8:30. I'll be in chambers by 7:30 if I need to meet with you regarding any overnight disputes that not been able to be resolved through the meet anDConfer process. My staff and I will expect a snapshot update by email at 10:00 p.m.--not 2:00 a.m., 10:00 p.m.--and let me know where you are. That is not a signal to stop working for the evening. You are to continue to meet anDConfer, but that gives me some idea of where you are on overnight disputes.

Again, you're to continue your efforts to meet, anDConfer and if there are surviving disputes that haven't been able to be resolved overnight, I will meet with you before the jury comes in tomorrow and hear your positions out and give you guidance on those surviving disputes. I don't enjoy getting up early enough to get here in time to do that well before the jury comes in. I do that to maximize your designated trial time and to save you time so that you don't have issues that

have to be brought up while you're on the clock in the courtroom. So take advantage of that, if necessary. It would be my continued hope it won't be necessary. So far you've done a good job in keeping to a workable number the overnight disputes that we've had to take up each morning. I hope and trust that that will continue.

But that's the process, and I'll look for an accurate snapshot update of where you are on that by 10:00 p.m. this evening.

Now, with that, are there questions from either side before we recess for the day?

Anything from the Plaintiff, Mr. Bennett?

MR. BENNETT: No questions, but as required by the Court's order, we are announcing that we will likely rest tomorrow.

THE COURT: I anticipate that you will rest after Mr. Dell testifies.

MR. BENNETT: That is correct.

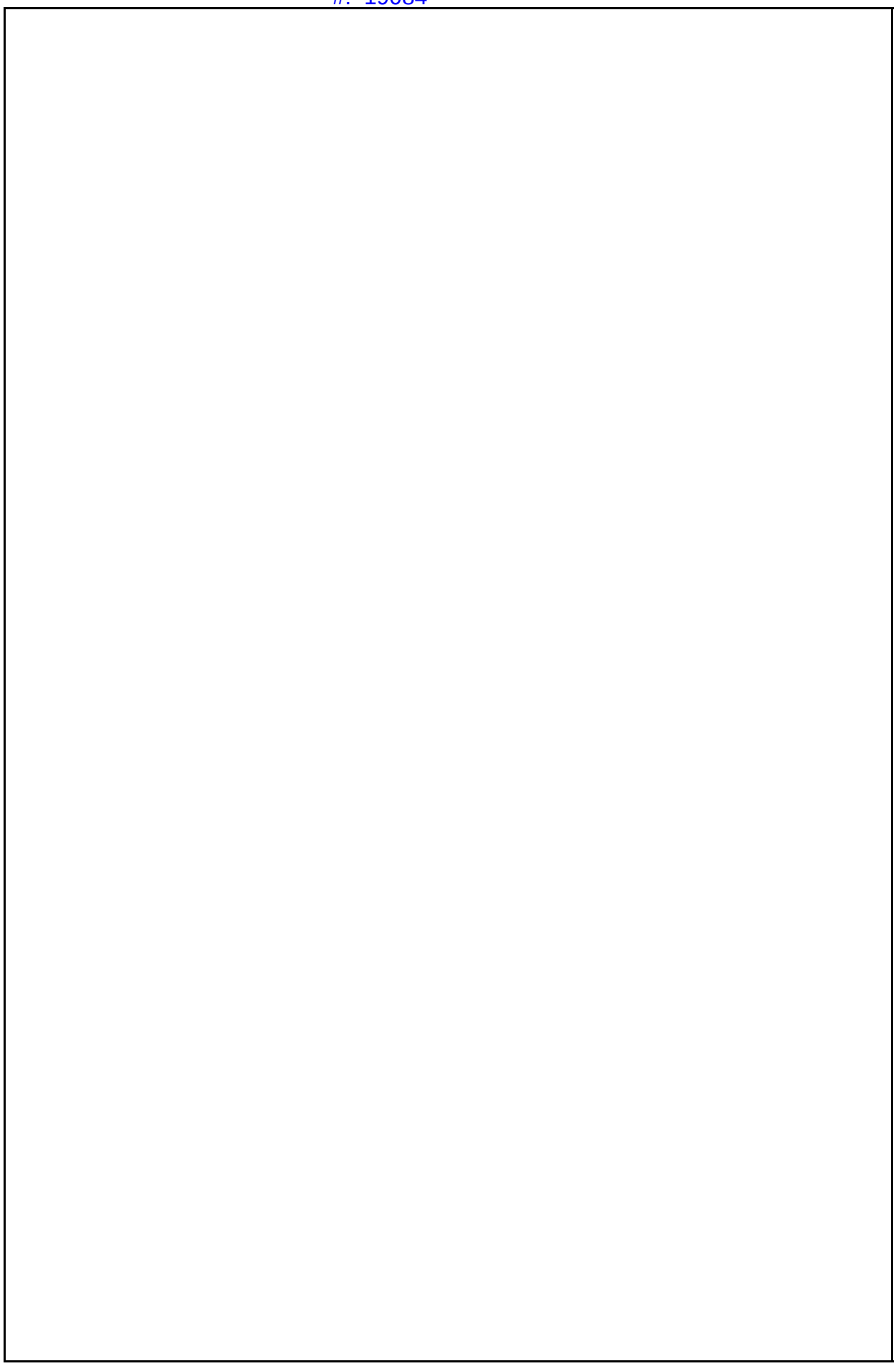
THE COURT: All right. Anything from the Defendant, Mr. Dacus?

MR. DACUS: No, Your Honor. Thank you.

THE COURT: All right, counsel. I will see you in the morning.

Until then we stand in recess.

(The proceedings were concluded at 5:47 p.m.)



I HEREBY CERTIFY THAT THE FOREGOING IS A CORRECT TRANSCRIPT FROM THE RECORD OF PROCEEDINGS IN THE ABOVE-ENTITLED MATTER. I FURTHER CERTIFY THAT THE TRANSCRIPT FEES FORMAT COMPLY WITH THOSE PRESCRIBED BY THE COURT AND THE JUDICIAL CONFERENCE OF THE UNITED STATES.

S/Shawn McRoberts 04/02/2024

_____DATE_____
SHAWN McROBERTS, RMR, CRR
FEDERAL OFFICIAL COURT REPORTER

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